PRODUCT AND SYSTEM
TECHNICAL TRAINING
COURSE CATALOG
MOTOROLA SOLUTIONS - WORLDWIDE EDUCATION
Day in, and day out, governments and businesses around the world rely on effortless and reliable communication. Our customers call it their lifeline. To help businesses operate without interruption and to safeguard communities, workplaces, and ultimately, each one of us, we are determined to help keep the lifeline unbreakable.

With Motorola Solutions, Inc. Education Services, we help your two biggest lifeline investments - your personnel and your technology infrastructure - work together efficiently to maximize the value of your communication technologies.

Whether your organization is new to our latest innovations or has years of experience with us, our Education Services team helps expand your personnel’s skills and knowledge for the full application of your technology investment.

Starting with professionally developed, real-world application and content, we always design your training with the learner in mind. Our experienced instructors average 20+ years in the communications industry and specialize in Motorola Solutions technologies and services. Immersive, hands-on experiences, expert lab environments, or online learning ensure we meet your learners with the right kind of learning at the right times.

Whether training is delivered virtually, at your location or in our state-of-the-art facilities, we can help ensure that your personnel know how to amplify your investment, maximize operational efficiency, and ensure an unbreakable lifeline.

We look forward to working with you.
TABLE OF CONTENTS

GENERAL INFORMATION ............. 4
OUR LEARNING EXPERIENCE PORTAL .......... 4
TRAINING OPTIONS ...................... 6
QUALITY ASSURANCE:
THE TPMA FRAMEWORK .............. 8
EDUCATION PACKAGES ................. 9
HELPFUL INFORMATION ............... 11

OPERATOR TRAINING ................ 12
TRAIN THE TRAINER ..................... 13

COURSES ...................................... 14
FOUNDATIONAL ........................... 14
ASTRO® SYSTEMS ....................... 21
DIMETRA SYSTEMS .................... 33
CONSOLES .............................. 43
BASE STATIONS ......................... 47
SUBSCRIBERS ......................... 49
MOTOTRBO™ SYSTEMS ............... 54
SOFTWARE & APPLICATIONS .......... 60
GENERAL INFORMATION

OUR LEARNING EXPERIENCE PORTAL

AN INTERACTIVE PLATFORM... DESIGNED FOR YOU! THE LXP IS YOUR VALUABLE RESOURCE TO SEE THE LATEST COURSES, DESCRIPTIONS, REQUIREMENTS, DATES AND LOCATIONS.

Use the search box and filters feature to quickly and easily search for training or documentation.

View your history and upcoming training on your personalized dashboard.

Receive reminder notifications of upcoming training or changes to your training.

Easily locate and download documents plus stay up-to-date with training news and announcements.

http://learning.motorolasolutions.com
THE LEARNING EXPERIENCE PLATFORM (LXP)

The LXP is your valuable resource to see the latest courses, descriptions, requirements, dates and locations.

If you are a Motorola Solutions Customer who already has a Motorola Solutions Login ID, you can go to the “Enrol in a Course” section for further instructions.

SET UP A NEW USER ACCOUNT AND PASSWORD

- Visit: https://learning.motorolasolutions.com
- Click “Register”
- Fill Out all the required information on the form (if you are a MSI Customer with an established 10-digit Motorola Customer Account Number, please enter your Company Name in the form)
- Click “Submit”
- You will receive a confirmation of your submission
- You will next receive further information to activate your account (Up to 5 business days)

TO ENROLL IN A COURSE (ONCE YOU HAVE AN LXP ACCOUNT)

- Log in to the LXP: https://learning.motorolasolutions.com
- Click on “LOG IN”
- Enter your Log In ID and Password and Click “LOG IN”
- If you have forgotten your Log In or Password click on “Forgot Log In ID” or “Forgot Password”
- Find a training course by clicking “Browse Training” at the top of the screen Or use “Search Catalog” at the top of the screen
TRAINING OPTIONS

In this catalog you will find a wide range of learning initiatives; some of them have been developed to be completed at your own pace, and others are led by our Technical Instructors:

**LIVE TRAINING**
It consists of scheduled live sessions, delivered either in class or in a virtual environment by our Technical instructors. Participants can immerse themselves in the subject; they receive substantial time for hands-on training that enables them to develop creating solutions for unique problems. In both classes, the number of seats available is limited and advanced registration is required.

On-the-job training is also available, for those who prefer a more direct instruction.

**ONLINE TRAINING**
Online self-paced learning allows your team to gain foundational knowledge on a variety of topics using their computer, at their own schedule.

Where to start? Our training roadmaps will let you know the starting point and milestones of your development, so you can make sure you acquire the right knowledge to make the most of each step of your learning process.

POLICIES AND REQUIREMENTS

**CANCELLATION AND RESCHEDULING**
- **BY THE STUDENT**
  Customer cancellation or rescheduling made less than 30 days prior to the class start date will be subject to the full course tuition.

- **BY MOTOROLA SOLUTIONS**
  Motorola Solutions reserves the right to change or cancel classes up to 10 business days prior to the class start date. You will be notified at that time of such change or cancellation.

**PROFESSIONALISM**
Students are expected to maintain professional conduct and dress at all times. Class dress is casual, but smart. For safety and security reasons, we cannot permit shorts, thong type sandals, or tank tops in the classroom.

**LAPTOP REQUIREMENTS**
Some of our classes may require students to bring their laptops to the classroom so that they may utilize an electronic copy of the class material. Please review your enrollment confirmation email for specific requirements for your class.

**TRAINING CONTENT AND STRATEGY DISCLAIMER**
All of Motorola Solutions training classes are designed to support and align with the Motorola Solutions Service strategy for each product. This strategy may include a combination of (but not limited to) processes, procedures, recommendations, and instructor experiential advice which may involve repair, replacement, and/or recovery of hardware, software, or firmware of Motorola Solutions products. The repair, replacement, or recovery of these products may vary from product to product. Motorola Solutions reserves the right to change the structure and content of all courses at any time.
EDUCATION BUNDLES: ACCELERATE YOUR LEARNING JOURNEY

Worldwide Education understands your challenging needs during uncertain times. Travel limitations, the continued safety of your first responders that serve and protect your citizens, and assurance there is zero training downtime is critical. To meet these challenges, we offer course bundles that combine a virtual learning experience with traditional, hands-on learning.

Watch the video to learn more about how you can accelerate your training today.

THE TWO COMPONENTS OF OUR EDUCATION BUNDLES
The virtual component will focus on live discussions, application-based demonstrations, and various online activities using our virtual training hosted solutions and our lab environment.

The practical component will take place at either one of our facilities or, in case of buy-out sessions, at your location. This part of the training will focus on performing the tasks discussed in the virtual sessions. Once you have complete the two components, you will receive credit for the bundle and the equivalent traditional course.

Compared to our traditional full in-class offerings, you may be able to combine multiple practical components into one week or less. This will not only allow you to complete multiple courses (bundles) during that time, it will also help to reduce your overall travel costs and time investment.

BENEFITS FOR YOU
• Live training sessions led by our subject-matter expert certified instructors accessible from your computer
• Practice through demos and guided virtual lab environment
• Active participation and interaction assured, by limiting the number of participants per group
• Reduction of travel expenses and time away from home

READY TO GET STARTED?
Find your courses or email us at training.lacr@motorolasolutions.com
QUALITY ASSURANCE:
THE TPMA FRAMEWORK

MOTOROLA SOLUTIONS WORLDWIDE EDUCATION COMMITS TO EXCELLENCE IN INSTRUCTOR-LED TRAINING
For 45+ years, our instructors continue to be laser-focused on your two lifeline investments - your personnel and your technology infrastructure. Our mission is to work together efficiently to maximize the value of your communication technologies.

Motorola Solutions is aware of the impact training experiences have on your team and your organization. When it comes to supporting the success of your employees and your technology infrastructure, we seek to continually deliver exceptional training to you.

For over 10 years, we have built and implemented the Training Performance Monitoring & Assessment (TPMA) framework in our organization. Our internal instructors are held to the highest level of training standards outlined within the Learning & Performance Institute (LPI). The TPMA certificate is widely-recognized and accepted as the premiere institute for learning, assessing and benchmarking trainer progress.

Anywhere in the world, those who hold a TPMA certificate demonstrate that they have reached or exceeded the highest standards demanded within the industry.

WHY DO TPMA CERTIFICATIONS MATTER?
Adopting TPMA standards is essential to meet industry trends and leading industry best practices to meet user needs, enhance instructor development and ultimately leads to a happy customer experience.

LPI ensures the quality of the instructors’ training delivery is maintained and meets the highest quality standards, provides expert feedback on their performance and promotes the development of their facilitator skills.

Visit us at learning.motorolasolutions.com to register for our training courses.

ACHIEVING OPTIMAL PERFORMANCE MATTERS TO US
• We focus on the needs of the learner, not the trainer
• The personalized approach and structured consistency of standardized-requirements help win business

“The instructor did an outstanding job. Truly a professional and extremely knowledgeable. Never rushed and always listened. Provided feedback to all questions and allowed students to participate at their own level of expertise and speed.”

“The Instructor was extremely helpful during the training. He has an excellent way of teaching and was very attentive to the students when asked questions. I liked that he went over each and every field of CPS. Excellent Instructor! I would recommend to anyone!”

“The instructor showed outstanding skills to combine theory, practice, actual cases and hands-on training. Great training.”

“Exceptional course, no words to explain the instructor’s commitment and professionalism. Vast experience, humbleness, patience and amazing teaching skills. A different and positive class.”

“Excellent coach. Direct, precise, detailed. Explain everything in the right way. Honestly, the best coach I have ever had. They do not skip anything, explain everything in detail. My knowledge after this training is much better. During the entire training, he was fully committed to us.”

“The best teacher I have ever had in any previous training courses. Very challenging and interactive teaching helping me to understand the system from the bottom to top with a lot of additional slides from the teacher with extremely good and clear explanations in the system networking for deeper understanding.”

“One of the best instructors I had. Speaks clearly, responsive to the students; actions and very good at making the students stay alert and attentive.”

“Amazing training, very glad to join it. Amazing trainer, very vibrant, very knowledgeable trainer. Looking forward to more training with him. Good trainer from a good company.”
EDUCATION PACKAGES

Motorola Solutions Education Packages have been built by our technical education experts, to provide you a simpler way to select the right learning activities from our extensive training portfolio. These packages are all designed considering four vital aspects:

- Your Motorola Solutions Infrastructure & Devices
- The Level of Support provided by Motorola Solutions
- The tasks undertaken by your team, and
- The roles of the professionals in charge of those tasks

Behind these packages there are Education Services professionals whose aim is to fully prepare your team to achieve desired organizational efficiency and outcomes by ensuring that they have the knowledge, skill and competency needed to effectively interact with your Motorola Solutions technology investment.

If you wish to customize your Motorola Solutions training strategy, ask our Professional Education Services team to analyze your specific technical and end user training needs and gaps. Please work with your Motorola Solutions account representative to request this professional service.

Let Motorola Solutions Education Services help you ensure that your organization provides effortless and reliable communications, and keep your lifeline stronger than ever!

ASTRO® INFRASTRUCTURE EDUCATION PACKAGES

COMPLEMENT EDUCATION PACKAGE
Prepare your team to operate your ASTRO® Solution, achieving optimal organizational efficiency.

SUPPLEMENT EDUCATION PACKAGE
Prepare your team to operate and administer your ASTRO® Solution, achieving optimal organizational efficiency.

SUPPORT EDUCATION PACKAGE
Prepare your team to operate, administer, and maintain your ASTRO® Solution, achieving optimal organizational efficiency.

TOPICS

ASTRO® DEVICES EDUCATION PACKAGES

COMPLEMENT EDUCATION PACKAGE
Prepare your team to operate your APX™ devices.

SUPPLEMENT EDUCATION PACKAGE
Prepare your team to operate and administer your APX™ devices.

SUPPORT EDUCATION PACKAGE
Prepare your team to operate, administer, and maintain your APX™ devices.

TOPICS
- Device Overview, My View Portal, Device End User Best Practices
- Device Overview, Programming and Radio Management, Device End User Best Practices
- Device Overview, Programming and Radio Management, Radio Maintenance, Device End User Best Practices

Talk with your Motorola Solutions contact for a quote, or email us at training.lacr@motorolasaolutions.com for more information on how to sign your team up for one of our Education Services Packages.
SAMPLE PACKAGES

<table>
<thead>
<tr>
<th>ASTRO® INFRASTRUCTURE SUPPLEMENT EDUCATION PACKAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Education Package aligns with the Infrastructure ADVANCED Services Package</td>
</tr>
<tr>
<td>ASTRO® 25 SYSTEM OVERVIEW</td>
</tr>
<tr>
<td>MY VIEW PORTAL OVERVIEW</td>
</tr>
<tr>
<td>ASTRO® FEATURES AND FUNCTIONality</td>
</tr>
<tr>
<td>ASTRO® 25 SYSTEM FLEETMAPPING</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D RADIO SYSTEM ADMINISTRATOR</td>
</tr>
<tr>
<td>MCC 7000 SERIES MANAGEMENT</td>
</tr>
<tr>
<td>CONSOLE ADMINISTRATOR &amp; DISPATCH END USER TRAINING</td>
</tr>
<tr>
<td>RADIO END USER TRAIN-THE-TRAINER</td>
</tr>
<tr>
<td>WAVE™ ADMINISTRATION &amp; END USER</td>
</tr>
<tr>
<td>IMW OPERATIONS AND ADMINISTRATION</td>
</tr>
<tr>
<td>RADIO AUTHENTICATION</td>
</tr>
<tr>
<td>EXECUTIVE OVERVIEW</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D SECURE COMMUNICATIONS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APX DEVICE SUPPORT EDUCATION PACKAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Education Package aligns with the APX Device ESSENTIAL Services Package</td>
</tr>
<tr>
<td>APX QUICK START</td>
</tr>
<tr>
<td>APX RADIO MANAGEMENT OVERVIEW</td>
</tr>
<tr>
<td>APX CPS PROGRAMMING &amp; TEMPLATE BUILDING</td>
</tr>
<tr>
<td>APX RADIO MANAGEMENT WORKSHOP</td>
</tr>
<tr>
<td>APX TECHNICAL SUBSCRIBER ACADEMY</td>
</tr>
<tr>
<td>RADIO END USER TRAIN-THE-TRAINER</td>
</tr>
</tbody>
</table>

LEGEND:
- Foundation
- Administration
- Maintenance
- Device & Console Best Practices
- Optional

Talk with your Motorola Solutions contact for a quote, or email us at training.lacr@motorolasolutions.com for more information on how to sign your team up for one of our Education Services Packages.
GENERAL INFORMATION

For information on prerequisites and to register for courses visit the LXP at: LEARNING.MOTOROLASOLUTIONS.COM

For general information contact the Latin America Education Services Help Desk at: training.lacr@motorolasolutions.com

HELPFUL INFORMATION

FOR QUESTIONS AND ASSISTANCE

The LXP Helpdesk is available for you Monday – Friday from 8:00 am - 6:00 pm (U.S. EST) on the phone numbers listed on the table below. Attention is available in Spanish, Portuguese and English.
You may also email our LXP Helpdesk at: training.lacr@motorolasolutions.com

HOW TO MAKE PAYMENTS WHEN ENROLLING IN A COURSE

HOW TO MAKE PAYMENTS WHEN REGISTERING

Prepayment is required to secure your registration and it must be received by Motorola Solutions 30 days prior to your attendance.
Contact the Help Desk above for assistance with payments and P.O. specifications.
All pricing listed is US dollars.

CONTACT MOTOROLA SOLUTIONS LATIN AMERICA

<table>
<thead>
<tr>
<th>Country</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARGENTINA</td>
<td>0800-333-3708</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>0800-892-4264</td>
</tr>
<tr>
<td>CHILE</td>
<td>123-0020-2126</td>
</tr>
<tr>
<td>COLOMBIA</td>
<td>01-800-710-2285</td>
</tr>
<tr>
<td>COSTA RICA</td>
<td>0800-013-1450</td>
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<tr>
<td>MEXICO</td>
<td>001-855-241-8253</td>
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<tr>
<td>PANAMA</td>
<td>001-800-205-3867</td>
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<tr>
<td>PERU</td>
<td>0800-55760</td>
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<tr>
<td>VENEZUELA</td>
<td>0800-100-9332</td>
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</tbody>
</table>

For assistance you can also dial one of the following direct phone lines according to your language of preference:

LEARNING HELPDESK PHONE NUMBERS

<table>
<thead>
<tr>
<th>Language</th>
<th>DID Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPANISH</td>
<td>3127255372</td>
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<td>PORTUGUESE</td>
<td>3127255373</td>
</tr>
<tr>
<td>CARIBBEAN</td>
<td>3127255368</td>
</tr>
</tbody>
</table>

For assistance specific for partner accounts please contact us at: partners.lacr@motorolasolutions.com
OPERATOR TRAINING

THE SUCCESSFUL IMPLEMENTATION OF YOUR COMMUNICATIONS SYSTEM DEPENDS ON ITS CONFIDENT USERS.

Users of your mobile and portable radios require training on their units to understand its basic operation, features and functions.

Dispatchers of your consoles require training to understand basic operation, features and functions; management personnel require training on the Motorola Solutions applications.
TRAIN THE TRAINER

With this option, Motorola Solutions trains people you have identified as qualified instructors so that they in turn can train each individual user in your organisation. These classes are typically done on site using your equipment. The interactive End-user toolkit (iEUTK) and/or tailored end user materials can be utilised.

AUDIENCE
This course is geared for customers who have an experienced, dedicated training staff in their organisation. This course concentrates on specific product features and how it relates to the training process.

COURSE OVERVIEW
This course provides the customer’s identified training personnel knowledge and practice applying training techniques that will enable them to successfully train their students. Trainers will use simulation, facilitation and hands-on activities to facilitate learning events supported by tailored training materials and job aides. Students will become proficient in discussing common tasks associated with the operation of the customer’s radios and consoles as identified by the customer’s needs analysis.

Note: This course is presented as customer specific and will cover pertinent information on customer equipment.

REQUISITE KNOWLEDGE
Previous training experience and radio system knowledge is a must.

OPERATOR TRAINING

With this option, the users within your organisation are trained by a Motorola Solutions instructor. These classes are typically done on site using your equipment. The interactive End-user toolkit (iEUTK) and/or tailored end user materials support this training option.

CONSOLES TRAINING
These courses provide operators and supervisors with an introduction to the basic operation, administration and feature functionality of the Console Systems. Through facilitation and hands-on practice, users learn to perform tasks that are associated with their organisation’s particular system.

- Overview of console configuration
- Console dispatcher and supervisor operation
- Alias Management
- Messaging

SUBSCRIBER TRAINING
These courses provide radio users with an introduction to their radios, a review of their radio’s basic functionality by means of job aides tailored to exactly how they use their radios. Through facilitation and hands-on practice, users learn to perform common tasks associated with their radio configuration.

- Overview of radio configuration
- General radio operations

COURSES FOR CONSOLE PRODUCTS

- MCC 7000 Series Dispatch Console Administrator Training
- MCC 7000 Series Dispatch Console Operator Training
- MCD 5000 Operator Training

COURSES FOR MOBILES & PORTABLES

- MTP/MTM Series
- APX™ Series
- MOTOTRBO™ Series

TO REQUEST FIELD TRAINING, PLEASE CONTACT YOUR ACCOUNT MANAGER.
Note: The interactive End-user toolkit (iEUTK) is not sold as a standalone product but included with our instructor-led, Train The Trainer or Operator Training.
<table>
<thead>
<tr>
<th>Course Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASIC RF (RDS0002)</td>
<td>17</td>
</tr>
<tr>
<td>BASIC RADIO (RDS0004)</td>
<td>17</td>
</tr>
<tr>
<td>BASIC NETWORKING (RDS0003)</td>
<td>17</td>
</tr>
<tr>
<td>RF FOR RADIO PROFESSIONALS (RDS2012)</td>
<td>18</td>
</tr>
<tr>
<td>SPECTRUM FREQUENCIES SYSTEMS (RDS1037)</td>
<td>18</td>
</tr>
<tr>
<td>COMMUNICATION SYSTEMS CONCEPTS (NST021)</td>
<td>18</td>
</tr>
<tr>
<td>NETWORKING ESSENTIALS IN MOTOROLA SOLUTIONS COMMUNICATIONS EQUIPMENT (NST762)</td>
<td>19</td>
</tr>
<tr>
<td>SITE INSTALLATION PRACTICES WORKSHOP (NST925)</td>
<td>19</td>
</tr>
<tr>
<td>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – TECHNICIAN (ACT100E)</td>
<td>19</td>
</tr>
<tr>
<td>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – SYSTEM ADMINISTRATOR (ACT101E)</td>
<td>20</td>
</tr>
<tr>
<td>ASTRO® 25 SYSTEMS APPLIED NETWORKING (NWT003)</td>
<td>20</td>
</tr>
<tr>
<td>MOTOTRBO™ SYSTEMS APPLIED NETWORKING (PCT2007)</td>
<td>20</td>
</tr>
</tbody>
</table>
RF FUNDAMENTALS

RF BASICS / RADIO SYSTEM BASICS

BASIC RF
RDS0002

2 HRS

BASIC RADIO
RDS0004

4 HRS

COMMUNICATION SYSTEMS CONCEPTS
NST021

5 DAYS

CURRICULUM COMPLETE
PARTICIPANT HAS RF KNOWLEDGE REQUIRED FOR ADVANCING TO MORE COMPLEX TECHNICAL TRAINING COURSES.
IP/NETWORKING FUNDAMENTALS

BASIC NETWORKING

1 HR
RDS003

NETWORKING ESSENTIALS IN MOTOROLA SOLUTIONS COMMUNICATIONS SYSTEM

5 DAYS
NST762

CHOOSE ONE OF THE FOLLOWING COURSES BELOW ACCORDING TO YOUR SOLUTION SYSTEM

ASTRO® 25 SYSTEM

ASTRO® 25 SYSTEMS APPLIED NETWORKING

5 DAYS
NWT003

MOTOTRBO™ SYSTEM

MOTOTRBO™ SYSTEMS APPLIED NETWORKING

4 DAYS
PCT2007

CURRICULUM COMPLETE
PARTICIPANT HAS IP PROTOCOLS AND NETWORKING SKILLS TO USE MOTOROLA SOLUTIONS SYSTEMS REQUIRING ADVANCED TECHNICAL TRAINING.
RADIO SOLUTIONS FOUNDATIONAL
For general information contact the Latin America Education Services Help Desk at:
training.lacr@motorolasolutions.com

COURSE OVERVIEW
This course emphasizes the concepts behind RF Systems theory and operation. Topics include basic radio transmitters and receivers, RF propagation, modulation, antenna systems, transmission lines and data-communications.

TARGET AUDIENCE
Technical staff who need to understand communication systems concepts.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe electrical principles, including direct and alternating current.
• Describe the basic structure of radio transmitters and receivers.
• Describe the operation of the antenna system.
• Identify different types of transmission media.
• Describe RF propagation and understand system gains in a link budget.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
The purpose of this course is to provide the student with the basic, foundational land mobile two-way radio knowledge required when working with Motorola Solutions. This course is ideal for all people who sell or service land mobile two-way radios and it was especially designed to meet the needs of the MR Channel and Motorola Solutions employees.

TARGET AUDIENCE
Individuals who need a foundational overview of two-way radios.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Define what a two-way radio is.
• Describe two-way radio components.
• Describe communication types.
• List and describe ways of expanding coverage.
• Describe analog and digital solutions.
• Describe how transmit and receive processes work in conventional and trunked two-way radio.
• Define system scalability.
• Identify the considerations to implementing a two-way radio.
• List the characteristics of single-site, single-zone and multi-zone systems.
• Explain the concept of two-way radio security.
• Describe the open standards for the following technologies: APCO P25, TETRA and DMR.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• RDS0002 Basic RF

PREREQUISITES
None

COURSE OVERVIEW
This course provides a detailed description of the fundamentals of system networking. Topics include the OSI seven layer model, bridges and switches, IP and routing, applications and security.

TARGET AUDIENCE
Engineers who need to understand the essentials of system networking.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Identify the elements and interconnectivity of a basic network.
• Define the OSI and TCP/IP Models.
• Define the advantages of different Network Layout Options.
• List the Physical and Data-Link Layers of the OSI and TCP/IP Models.
• Define the Network and Transport Layers of the OSI and TCP/IP Models.
• Identify the Service Layers within the OSI and TCP/IP Model.
• Define the concept of Network Security.
• Identify standards organizations.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None
## RADIO SOLUTIONS FOUNDATIONAL

For general information contact the Latin America Education Services Help Desk at: training.lacr@motorolasolutions.com

For information on prerequisites and to register for courses visit the LXP at: LEARNING.MOTOROLASOLUTIONS.COM

### COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Topics include basic radio transmitters and receivers, RF propagation, modulation, antenna systems, transmission lines and data-communications.

### TARGET AUDIENCE

Technical staff, who need to understand Communication Systems Concepts including basic radio, RF propagation, modulation, antenna systems, transmission lines and data-communications.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Describe basic circuit-related phenomena and elements
- Describe the filtering process and types of RF filters
- Describe and compare digital modulation schemes
- List common frequency spectrum bands and describe their common uses
- Describe the transmission line theory
- Provide the rules for cable selection, routing and installation
- List advanced RF hardware filters, and provide their descriptions
- Discuss RF performance issues
- List and describe transmitter performance parameters
- List and describe receiver performance parameters
- List and describe common test equipment
- Describe the RF troubleshooting process

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:
- RDS0002 RF Basics

### PREREQUISITES

None

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## RF FOR RADIO PROFESSIONALS

RDS2012 3 HRS

### COURSE OVERVIEW

This course shows the students the functioning and adjustment of Combiners, Duplexers and Antennas. In addition to amplifiers operating theories and Top Multi couplers, reception systems sensitivity, Spectrum Analyzer. It will also be shown how to build up the major types of RF connectors.

### TARGET AUDIENCE

Maintenance Technicians/Engineers

### COURSE OBJECTIVES

On completion of this course delegates will be able to:

- Set combiners and duplexers
- Know what type of antenna to use for the system
- Adjust the receiving system in relation to noise and signal to manufacture the connectors properly

### REQUISITE KNOWLEDGE

Knowledge on basic electronic concepts

### PREREQUISITES

None

---

## SPECTRUM FREQUENCIES SYSTEMS

RDS1037 5 DAYS

### COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Major topics covered include:

- RF System Operation, including talkaround, repeater operation, and types of signaling used in RF Systems
- A basic walkthrough of building a communication system from Simplex, to Half Duplex, Voting Systems, and Simulcast is done, emphasizing the improvements in communication obtained with each step.
- Trunking Operation, including Smartzone operation
- Types of modulation used in RF System operation, including ASTRO®
- Radio frequency path including the antenna and transmission line
- Decibels and their uses on the job
- RF Propagation/RF Interference
- Basic Troubleshooting practices from the system perspective

### TARGET AUDIENCE

Individuals who are interested in the operational concepts driving modern communication systems.

### COURSE OBJECTIVES

Upon completing this course, the student will be able to:

- Define terms commonly used in two--way communication systems
- Effectively use two--way radio communication systems knowledge to troubleshoot typical two-way communication radio systems
- Develop requirements for a two--way radio system by establishing programming and protocol requirements as requested
- Improve skills in the interpretation of typical two-way radio checks of the receiver, transmitter and the antenna system to troubleshoot a two-way radio communication system
- Use decibels to interpret the radio frequency path and antenna system to describe expected radio communication system performance and troubleshooting

### REQUISITE KNOWLEDGE

- Knowledge of basic electronics
- Experience using standard communication test equipment

### PREREQUISITES

None

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## COMMUNICATION SYSTEMS CONCEPTS

NST021 5 DAYS

### COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Topics include:

- RF System Operation, including talkaround, repeater operation, and types of signaling used in RF Systems
- A basic walkthrough of building a communication system from Simplex, to Half Duplex, Voting Systems, and Simulcast is done, emphasizing the improvements in communication obtained with each step.
- Trunking Operation, including Smartzone operation
- Types of modulation used in RF System operation, including ASTRO®
- Radio frequency path including the antenna and transmission line
- Decibels and their uses on the job
- RF Propagation/RF Interference
- Basic Troubleshooting practices from the system perspective

### TARGET AUDIENCE

Technical staff, who need to understand Communication Systems Concepts including basic radio, RF propagation, modulation, antenna systems, transmission lines and data-communications.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Describe basic circuit-related phenomena and elements
- Describe the filtering process and types of RF filters
- Describe and compare digital modulation schemes
- List common frequency spectrum bands and describe their common uses
- Describe the transmission line theory
- Provide the rules for cable selection, routing and installation
- List advanced RF hardware filters, and provide their descriptions
- Discuss RF performance issues
- List and describe transmitter performance parameters
- List and describe receiver performance parameters
- List and describe common test equipment
- Describe the RF troubleshooting process

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:
- RDS0002 RF Basics
RADIO SOLUTIONS FOUNDATIONAL

For general information contact the Latin America Education Services Help Desk at:
training.lacr@motorolasolutions.com

For information on prerequisites and to register for courses visit the LXP at:
LEARNING.MOTOROLASOLUTIONS.COM

COURSE OVERVIEW
The Networking Essentials in Motorola Solutions Communications Equipment course provides the technician with the essential elements of networking required for the installation and maintenance of most Motorola Solutions communications systems. The course includes ample hands-on and basic troubleshooting on network elements.

TARGET AUDIENCE
System Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Recall basic network terminology
- Compare basic configuration types, both logical and physical
- Describe the basic OSI (Open System Interconnect) model compared with the TCP/IP model
- Construct a basic LAN with a Windows Server Domain Controller and workstations
- Examine the interaction between the routers through their configurations
- Use common network commands to simulate traffic and validate connectivity and routing

REQUISITE KNOWLEDGE
- An understanding of basic Motorola Communications Systems
- Basic familiarization with computer operating systems
- Completion of Basic Networking course (RDS0003) or equivalent experience

PREREQUISITES
None

COURSE OVERVIEW
The Site Installation Practices Workshop (R56) course is designed to present the standards and guidelines for installing a Motorola Solutions communication system. Participants will understand how a properly installed system can help to ensure a safe and efficient communications system, reducing system down time.

TARGET AUDIENCE
Technicians who need an introduction to the R56 processes.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- List the purposes of grounding and evaluate their importance in terms of personal safety and effective system installation and protection
- Apply principles of basic electronics to the installation standards found in the R56 manual
- Determine how an effectively installed ground system provides protection for a communication system from a lightning strike or electrical anomalies
- List the minimum requirements and specifications for the external and internal ground system
- List the minimum requirements and specifications for installation equipment, cables and documentation for a reliable communication system installation
- Investigate sources for possible solutions to various installation scenarios

REQUISITE KNOWLEDGE
Graduate of a basic electronics course

PREREQUISITES
None

COURSE OVERVIEW
This course is designed to bring Technicians from different technical backgrounds and experience levels to a common starting point for the ASTRO® 25 curriculum. This course provides information from the basic concepts of radio communication systems and computer networking features, through the evolution that led to the ASTRO® 25 trunking system’s architecture.

TARGET AUDIENCE
This course is intended for System Technicians, and other ASTRO® 25 system users who are new to trunked radio systems. Also those with experience in non-IP-based radio systems like SmartNet and SmartZone.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Explain the different radio system concepts as applied to conventional and trunked systems
- Compare analog radio communication signaling to ASTRO® 25 radio communications signaling
- Identify different communication concepts using representative block diagrams of the respective systems
- Compare radio system communication concepts using representative block diagrams of the respective systems
- Compare how voice and data, information flow through different radio communication system types and how the signaling information controls that flow of information
- Describe the features of each radio communication system in terms of advantages and disadvantages

REQUISITE KNOWLEDGE
None

PREREQUISITES
None
COURSE OVERVIEW
This course is designed to bring Administrators from different technical backgrounds and experience levels to a common starting point for the ASTRO® 25 curriculum. This course provides five modules from the basic concepts of radio communication systems and computer networking features, through the evolution that led to the ASTRO® 25 trunking system's architecture.

TARGET AUDIENCE
System Administrators who are new to trunked radio systems. Also those with experience in non-IP-based radio systems like SmartNet and SmartZone.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Identify different communication concepts using representative block diagrams of the respective systems
• Compare radio system communication concepts using representative block diagrams of the respective systems
• Compare how voice and data information flows through different radio communication system types, and how the signaling information controls that flow of information
• Describe the features of each radio communication system in terms of advantages and disadvantages
• Explain the Trunked Radio System Concepts

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
The ASTRO® 25 Systems Applied Networking course provides technicians with the necessary networking information required for understanding the network components installed in modern Motorola communications systems. The course includes familiarization with basic networking concepts, and the networking components deployed in the ASTRO® 25 System.

TARGET AUDIENCE
Technical System Managers and Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Define basic IP network concepts, hardware and protocols.
• Describe the LAN topologies for the ASTRO® 25 system.
• Describe the WAN topologies for the ASTRO® 25 system.
• Identify the current and legacy network components such as switches and routers.
• Perform backup, restore, and recovery procedures of routers and LAN switches.
• Analyze basic IP network connectivity and addressing.
• Define ASTRO® 25 Master Site VLAN/VRRP operation.
• Define ASTRO® 25 Network Transport Subsystem.
• Describe the various ASTRO® 25 Network Management applications.
• Identify network security components and concepts in an ASTRO® 25 system.
• Diagram SNMP deployment throughout the system.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• NST762 Networking Essentials in Motorola Communications Equipment

PREREQUISITES
None

COURSE OVERVIEW
The MOTOTRBO™ Systems Applied Networking provides technicians with the necessary information required for understanding the typical networking requirements for implementing a variety of MOTOTRBO™ solutions. The course includes familiarization/review of basic networking concepts and MOTOTRBO™-specific networking requirements. This course will focus on specific configurations for IP Site Connect, Linked Capacity Plus, and Connect Plus trunking systems.

TARGET AUDIENCE
Technical System Managers and Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Recall Basic Networking Concepts
• Identify recommended network components for MOTOTRBO™ systems
• Define LAN/WAN topologies for MOTOTRBO™ systems
• Perform backup, restore and recovery of recommended network components
• Identify network security concepts for MOTOTRBO™ systems

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• NST762 Networking Essentials in Motorola Communications Equipment

PREREQUISITES
None
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTRO® 25 IV&amp;D SYSTEM OVERVIEW (AST1038)</td>
<td>27</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D RADIO SYSTEM ADMINISTRATOR WORKSHOP (AST4102)</td>
<td>27</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D WITH M CORE WORKSHOP (AST4103)</td>
<td>27</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D M CORE SYSTEM OVERVIEW (AST1067)</td>
<td>28</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D SECURE COMMUNICATIONS WORKSHOP (AST4207)</td>
<td>28</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D GTR 8000 REPEATER SITE WORKSHOP (AST4208)</td>
<td>28</td>
</tr>
<tr>
<td>STANDALONE GTR8000 CONVENTIONAL BASE RADIO (AST2006)</td>
<td>29</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D CONVENTIONAL CORE WITH CONFIGURATION MANAGER WORKSHOP</td>
<td>29</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D CONVENTIONAL RF SITE WORKSHOP (AST4440)</td>
<td>29</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D DYNAMIC SYSTEM RESILIENCE (ACS715023)</td>
<td>30</td>
</tr>
<tr>
<td>ASTRO® 25 SYSTEMS FLEETMAPPING (RDS1017)</td>
<td>30</td>
</tr>
<tr>
<td>INTRODUCTION TO KVL 5000 (AST0067)</td>
<td>30</td>
</tr>
<tr>
<td>NEW FEATURES FOR ASTRO® 25 RELEASE 7.17 (AST1068)</td>
<td>31</td>
</tr>
<tr>
<td>NEW FEATURES FOR ASTRO® 25 RELEASE 7.17.2 (AST0058)</td>
<td>31</td>
</tr>
<tr>
<td>NEW FEATURES FOR ASTRO® 25 RELEASE 7.17.3 (AST0061)</td>
<td>31</td>
</tr>
<tr>
<td>NEW FEATURES FOR ASTRO® 25 2019.2 (AST0081)</td>
<td>32</td>
</tr>
<tr>
<td>ASTRO® 25 IV&amp;D INTRODUCTION TO RADIO SYSTEM MANAGEMENT APPLICATIONS</td>
<td>32</td>
</tr>
<tr>
<td>(AST1074)</td>
<td></td>
</tr>
</tbody>
</table>
ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR

**M Core**

- **ASTRO® 25 IV&D System Overview**
  - 2.5 HRS
  - AST1038

**L Core**

- **ASTRO® 25 IV&D Radio System Administrator Workshop**
  - 4.5 DAYS
  - AST4102

**Recommended Curriculum is Complete**

Participant should be able to carry out administrative tasks in the ASTRO® 25 IV&D System such as: provisioning subscribers and talk groups, generating historical reports, controlling deployed subscribers and managing network element configurations. Participant understands factors of system configuration that impact ASTRO® 25 System management.

**Optional Training Roadmap**

Optional training roadmap available. Click on this link to go to page 26 for additional details.
ASTRO® 25 IV&D M/L CORE TECHNICIAN

M CORE

2.5 HRS

AST1038

L CORE

ASTRO® 25 IV&D SYSTEM
OVERVIEW

ASTRO® 25 IV&D SYSTEM
CORE WORKSHOP

5 DAYS

AST4103

RECOMMENDED CURRICULUM IS COMPLETE

PARTICIPANT SHOULD UNDERSTAND ASTRO® 25 M CORE COMPONENTS, VIRTUAL SERVERS AND SERVICE STRATEGY. PARTICIPANT CAN INTERPRET SYSTEM ALARMS, PROPOSE SOLUTIONS FOR SYSTEM FAILURES, AND AS WELL AS RESTORING EQUIPMENT TO PROPER FUNCTIONALITY.

OPTIONAL TRAINING ROADMAP

OPTIONAL TRAINING ROADMAP AVAILABLE. CLICK ON THIS LINK TO GO TO PAGE 26 FOR ADDITIONAL DETAILS.
ASTRO® 25 IV&D REPEATER SITE TECHNICIAN (GTR)

**ASTRO® 25 IV&D SYSTEM OVERVIEW**

- **M CORE**
  - 2.5 HRS
  - AST1038

- **L CORE**

**ASTRO® 25 IV&D GTR 8000 REPEATER SITE WORKSHOP**

- 3 DAYS
- AST4208

**RECOMMENDED CURRICULUM IS COMPLETE**

Participant can maintain an ASTRO® 25 repeater site including: GTR8000 base station, GCP8000 site controller and other site equipment.

*Participant performs alignments troubleshooting and field replacement of site devices during course.*
ASTRO® 25 IV&D CONVENTIONAL RF SITE TECHNICIAN

M CORE

**ASTRO® 25 IV&D SYSTEM OVERVIEW**

2.5 HRS

AST1038

L CORE

**ASTRO® 25 IV&D CONVENTIONAL RF SITE WORKSHOP**

3 DAYS

AST4440

RECOMMENDED CURRICULUM IS COMPLETE

PARTICIPANT SHOULD BE ABLE TO MAINTAIN AN ASTRO® 25 REPEATER SITE INCLUDING THE GTR8000 BASE STATION, GCP8000 SITE CONTROLLER, SITE COMPARATOR AND OTHER SITE EQUIPMENT.

OPTIONAL TRAINING ROADMAP

OPTIONAL TRAINING ROADMAP AVAILABLE. CLICK ON THIS LINK TO GO TO PAGE 26 FOR ADDITIONAL DETAILS.
Motorola Solutions offers optional training for those participants who have completed their ASTRO® 25 curriculum and want to learn more about their system’s infrastructure and/or features. Select the training course below applicable to your system.

**ASTRO® IV&D OPTIONAL TRAINING CURRICULUM**

- **ASTRO® 25 IV&D Dynamic System Resilience**
  - 2 HRS
  - ACS715023

- **ASTRO® 25 IV&D Systems FleetMapping**
  - 5 DAYS
  - RDS1017

**SUBSCRIBER OPTIONAL TRAINING CURRICULUM**

- **APX™ CPS Programming and Template Building**
  - 2 DAYS
  - APX7001V

- **APX™ Technical Subscriber Academy**
  - 5 DAYS
  - APX010
ASTRO® 25 IV&D SYSTEM OVERVIEW

**COURSE OVERVIEW**

The ASTRO® 25 IV&D System Overview course will provide participants with knowledge and understanding of the ASTRO® 25 IV&D system. This course will address M, L and K Core systems. System architecture, components and features will be explained. In addition, RF and console sites and their architecture, features and components will be discussed. Finally, call processing for voice and mobile data applications will be covered, and an introduction to applications available in the ASTRO® 25 system will be provided.

**TARGET AUDIENCE**

Core Technicians, Site Technicians, Console Technicians, Core Managers.

**COURSE OBJECTIVES**

After completing this course, the student will be able to:
- Understand the general architecture of an ASTRO® 25 IV&D Radio System
- Understand key features of available in the ASTRO® 25 IV&D Radio System
- Understand the components of the ASTRO® 25 Zone Core
- Understand site components in the ASTRO® 25 system
- Understand the features, capabilities and components of the MCC7000 series dispatch consoles
- Understand concepts of Mobility and Call Processing in the ASTRO® 25
- Understand the applications for managing the ASTRO® 25 system

**REQUISITE KNOWLEDGE**

None

**PREREQUISITES**

None

2.5 HRS

AST1038

ASTRO® 25 IV&D SYSTEM ADMINISTRATOR WORKSHOP

**COURSE OVERVIEW**

This workshop covers administrator functions for an ASTRO® 25 Integrated Voice and Data (IV&D) System. Learning activities in this course focus on how to use the different ASTRO® 25 IV&D System Management applications. Participants will be provided with an opportunity to discuss how to structure their organization and personnel for optimal ASTRO® 25 IV&D system use.

**TARGET AUDIENCE**


**COURSE OBJECTIVES**

After completing this course, the student will be able to:
- Describe the relationship between radio programming, console administration and system management, and the impact of this relationship on system planning.
- List the network management tools applicable at each phase of the system life cycle.
- Identify the advantages and disadvantages of options available for the configuration of system infrastructure and user parameters.
- Use the report and real-time data to monitor performance and make adjustments necessary to maintain acceptable system performance levels.

**REQUISITE KNOWLEDGE**

Completion of the following courses or equivalent experience:
- AST1038 ASTRO® 25 IV&D System Overview
- ACT101E Bridging the Knowledge Gap – System Administrators
- NST762 Networking Essentials in Communication Equipment
- NWT003 ASTRO® 25 Applied Networking

**PREREQUISITES**

None

5 DAYS

AST4102

ASTRO® 25 IV&D SYSTEM CORE WORKSHOP

**COURSE OVERVIEW**

The ASTRO® 25 IV&D with ASTRO® 25 System Core course teaches advanced troubleshooting skills and best practices for the Trunked Large Systems. The course also focuses on gathering and analyzing system information to implement appropriate action(s) that return a system to full operational status.

**TARGET AUDIENCE**

ASTRO® 25 System Core Master Site Technicians

**COURSE OBJECTIVES**

After completing this course, the participant will be able to:
- Describe the ASTRO® 25 System architecture.
- Identify the functional and radio subsystems that comprise the ASTRO ® 25 System.
- Explain and discuss call flow and data flow through Large System Core devices and their subsystems.
- Perform recommended routine maintenance procedures for the ASTRO ® 25 Large System Core.
- Utilize the troubleshooting tools to diagnose a fault and restore the Large System Core to the level of the Motorola-supported service strategy.

**REQUISITE KNOWLEDGE**

Completion of the following courses or equivalent experience:
- Bridging the Knowledge Gap (ACT100E or ACT101E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Systems Applied Networking (NWT003)
- ASTRO® 25 IV&D System Overview (AST1038)

**PREREQUISITES**

None

5 DAYS

AST4103
COURSE OVERVIEW
The course provides a general description of the architecture, functions and components of an ASTRO version 7.15 trunking system.

TARGET AUDIENCE
System administrators, technical system administrators, system technicians, field service technicians.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe architectures with M-core, functions and components.
• Describe remote sites and their components.
• Describe types of information and routes used for control, voice and data.
• Describe the servers and databases used in an ASTRO 25 system with core M.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
This workshop describes planning, installation, configuration, operations, and troubleshooting of Secure Communications within the ASTRO® 25 IV&D System.

TARGET AUDIENCE
System Technicians, System Administrators, Technical System Managers

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Plan, organize, and implement Secure Communications in an ASTRO® 25 IV&D system.
• Install and configure a Key Management Facility (KMF) system and related components.
• Demonstrate centralized key management using Over-the-Air-Rekeying (OTAR).
• Perform System Administrator functions using the KMF server and KMF client.
• Troubleshoot installation and configuration problems for the KMF server, KMF client, and KMF database.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience:
• ACT100E Bridging the Knowledge Gap - Technicians
• NST762 Networking Essentials in Communication Equipment

PREREQUISITES
None

COURSE OVERVIEW
This workshop describes the components in the ASTRO® 25 IV&D System Repeater Site with GTR 8000 expandable site subsystem. This course also presents how the GTR 8000 expandable site subsystem operates and explains the tools and methods available for troubleshooting components within the subsystem.

TARGET AUDIENCE
GTR 8000 Site Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the ASTRO® 25 IV&D Repeater Site with GTR 8000 Expandable Site Subsystem configurations and components.
• Identify the GCP 8000 Site Controller functions and configuration requirements.
• Describe the connections and interfaces to the GCP 8000.
• Diagnose and troubleshoot the GCP 8000.
• Describe the functionality of the GTR 8000 Expandable Site Subsystem.
• Configure and troubleshoot the ASTRO® 25 Repeater Site with GTR 8000 Expandable Site Subsystem.
• Configure and troubleshoot the Network Transport subsystem.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience:
• AST1038 ASTRO® 25 IV&D System Overview
• ACT100E Bridging the Knowledge Gap - Technicians
• NST762 Networking Essentials in Communication Equipment
• NWT003 ASTRO® 25 Applied Networking

PREREQUISITES
None

COURSE OVERVIEW
The workshop describes planning, installation, configuration, operations, and troubleshooting of Secure Communications within the ASTRO® 25 IV&D System.

TARGET AUDIENCE
System Technicians, System Administrators, Technical System Managers

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Plan, organize, and implement Secure Communications in an ASTRO® 25 IV&D system.
• Install and configure a Key Management Facility (KMF) system and related components.
• Demonstrate centralized key management using Over-the-Air-Rekeying (OTAR).
• Perform System Administrator functions using the KMF server and KMF client.
• Troubleshoot installation and configuration problems for the KMF server, KMF client, and KMF database.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience:
• ACT100E Bridging the Knowledge Gap - Technicians
• NST762 Networking Essentials in Communication Equipment

PREREQUISITES
None
STANDALONE GTR8000
CONVENTIONAL BASE
RADIO
AST2006
2 DAYS

COURSE OVERVIEW
This course is designed to give the participants the ability to align, troubleshoot and repair the Standalone GTR8000 Base Station/Repeater to Motorola Solutions recommended service levels. Emphasis is placed on the use of Configuration Service Software (CSS) and its role in configuration, maintenance, diagnostics, alignments, and optimization of the Standalone GTR8000 Base Radio/Repeater.

TARGET AUDIENCE
Maintenance Technicians

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Understand basic concepts of the various radio systems supported by the GTR8000 Conventional Base Radio
• Identify the equipment modules of the GTR8000 Conventional Base Radio
• Operate and perform routine maintenance on the GTR8000 Conventional Base Radio
• Understand basic operational theory of GTR8000 Conventional Base Radio components
• Configure the GTR8000 Conventional Base Radio using Configuration Service Software (CSS)
• Identify the different backplane connections on the GTR8000 Conventional Base Radio
• Perform calibration and alignment adjustments for the GTR8000 Conventional Base Radio
• Troubleshoot problems and identify/replace faulty modules in the GTR8000 Conventional Base Radio

REQUISITE KNOWLEDGE
General RF Knowledge and Skills Basic Knowledge of Two-Way Radio systems

PREREQUISITES
None

ASTRO® 25 IV&D SYSTEMS
For information on prerequisites and to register for courses visit the LXP at: LEARNING.MOTOROLASOLUTIONS.COM

For general information contact the Latin America Education Services Help Desk at: training.lacr@motorolasolutions.com

EQUIPMENTS
PREREQ

Two-Way Radio systems

REQUISITE KNOWLEDGE
• Troubleshoot problems and identify/replace faulty modules in the GTR8000 Conventional Base Radio
• Perform calibration and alignment adjustments for the GTR8000 Conventional Base Radio
• Identify the different backplane connections on the GTR8000 Conventional Base Radio
• Configure the GTR8000 Conventional Base Radio using Configuration Service Software (CSS)
• Understand basic operational theory of GTR8000 Conventional Base Radio components
• Understand available maintenance tools and methods available for troubleshooting skills and best practices for the ASTRO® 25 IV&D Conventional Core with Configuration Manager. It also focuses on administrator functions and how to use the ASTRO® 25 IV&D Configuration Manager applications. A technical introduction to the MCC 7500 as used within the ASTRO® 25 IV&D Conventional Core with Configuration Manager, including some administrator functions, is also provided. Learning activities focus on gathering and analyzing system information to implement the appropriate actions that return a system to full operational status.

TARGET AUDIENCE
Master Site Technicians, System Administrators, Technical System Administrators, System Technicians, and other Application Users

COURSE OBJECTIVES
After completing the course the participant will be able to:
• Understand the key physical and functional characteristics of the ASTRO® 25 Conventional Core with Configuration Manager system.
• Perform tasks necessary to install the ASTRO® 25 Conventional Core with Configuration Manager system components.
• Perform configuration steps for the ASTRO® 25 Conventional Core with Configuration Manager system components.
• Understand the available maintenance tools and indicators in the ASTRO® 25 Conventional Core with Configuration Manager system.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• ACT101E Bridging the Knowledge Gap – System Administrators
• NST762 Networking Essentials in Motorola Communications Equipment
• NWT003 ASTRO® 25 System Applied Networking
• AST1038 ASTRO® 25 IV&D System Overview

PREREQUISITES
None

2 DAYS

COURSE OVERVIEW
The ASTRO® 25 IV&D Conventional RF Site workshop describes the components in the different ASTRO® 25 IV&D Conventional RF Sites topologies. This course also presents how the different ASTRO® 25 IV&D Conventional RF Sites topologies operate and explains the tools and methods available for troubleshooting components within the different ASTRO® 25 IV&D Conventional RF Sites topologies.

TARGET AUDIENCE
Site Technicians

COURSE OBJECTIVES
After completing the course the participant will be able to:
• Understand key physical and functional characteristics of conventional site.
• Perform tasks necessary to install conventional site components.
• Perform configuration steps for conventional site components.
• Understand available maintenance tools and indicators in conventional site.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• ACT101E Bridging the Knowledge Gap – System Administrators
• NST762 Networking Essentials in Motorola Communications Equipment
• NWT003 ASTRO® 25 System Applied Networking
• AST1038 ASTRO® 25 IV&D System Overview

PREREQUISITES
None
COURSE OVERVIEW
The ASTRO® 25 IV&D Dynamic System Resilience (DSR) Overview is a self-study training course intended to provide a technical overview of DSR. The course describes how DSR adds a geographically separate backup for the Master Site to protect against a catastrophic failure.

TARGET AUDIENCE
System Administrators, System Technicians, Field Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Differentiate between a non-DSR Master Site and a DSR Master Site
• Describe the DSR components, operation and functionality of each of the following services:
  – Voice
  – Data
  – Network Management
  – Network Transport
  – IP Services

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• AST1038 ASTRO® 25 IV&D System Overview

PREREQUISITES
None

COURSE OVERVIEW
This workshop addresses topics necessary for the effective planning and mapping of an ASTRO® 25 IV&D radio system. During this course, the participants will learn about ASTRO® 25 features, capabilities, and restrictions in order to effectively plan and prepare for a new or upgraded ASTRO® 25 system.

TARGET AUDIENCE
Pre-sale customers, new system managers, system planning personnel

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Discuss what a fleetmap is and why one is needed.
• Discuss the methodologies used to configure radio users and groups with the goal of optimizing the system resources.
• Describe the content to assist with fleetmapping decisions.
• Discuss frequency band plan organization and management.
• Describe basic planning requirements and complete a simple Fleetmap information template.
• Complete worksheets required to create a Fleetmap based on sample operational requirement information.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
The purpose of this training is to provide an introduction to the Key Variable Loader 5000. The course covers procedures which help participants familiarize themselves with the device and guide them through its configuration process. Participants will learn about features of KVL 5000, managing of encryption keys, loading keys into target device, configuring target devices using KVL 5000, sharing keys between KVLs, using KVL in an OTAR system, and managing log records.

TARGET AUDIENCE
Technical Support Staff responsible for managing secure devices.

COURSE OBJECTIVES
At the end of this course, you will be able to:
• Perform initial configuration of the KVL 5000
• Manage encryption keys in the KVL 5000
• Load keys and key groups into target devices
• View or remove keys from target devices
• Share keys between KVLs
• Configure and use the KVL 5000 in an OTAR system
• Manage key records

REQUISITE KNOWLEDGE
None

PREREQUISITES
None
NEW FEATURES FOR ASTRO® 25 RELEASE 7.17
2 HRS
AST1068

NEW FEATURES FOR ASTRO® 25 RELEASE 7.17.2
2 HRS
AST0058

NEW FEATURES FOR ASTRO® 25 RELEASE 7.17.3
2 HRS
AST0061

COURSE OVERVIEW
This presentation is to be customized by MSI field teams and/or key customer account personnel to their specific customer so that they may deliver New Features for ASTRO® 25 Release 7.17 training to their customer prior to receiving an upgrade to ASTRO® 25 Release 7.17, which includes upgrade support from Release 7.15 and 7.16. The intent of New Features for ASTRO® 25 Release 7.17 training is to:
• Educate system operators on added, changed, and removed features of the new system release.
• Highlight operational deltas to allow customers to plan within their organization and prepare for the changes to help ensure a smooth operational transition during upgrades.

TARGET AUDIENCE
Primary Audience; ASTRO® 25 Customers
Secondary Audience: Field Engineering; Customer Support Managers (CSMs); Key Customer Account Personnel
The secondary audience will be able to utilize the presentation materials to deliver New Features for ASTRO® 25 Release 7.17 training to their specific customers who will be upgrading to A7.17.

COURSE OBJECTIVES
At the end of this course, you should be able to:
• Identify changes as a result of the upgrade early to more easily manage the changes.
• Identify operational procedures that will go away as a result of the upgrade.
• Identify operational procedures that will change as a result of the upgrade.
• Identify new operational procedures that will be available as a result of the upgrade.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
This course describes the new features and feature enhancements introduced in the ASTRO® 25 7.17.2 system release. Optional features are introduced along with standard enhancements in this release.

TARGET AUDIENCE
ASTRO® 25 Customers

COURSE OBJECTIVES
At the end of this course, you should be able to:
• Identify changes as a result of the upgrade early to more easily manage the changes.
• Identify operational procedures that will go away as a result of the upgrade.
• Identify operational procedures that will change as a result of the upgrade.
• Identify new operational procedures that will be available as a result of the upgrade.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
This course describes the new features and feature enhancements introduced in the ASTRO® 25 7.17.3 system release. Optional features are introduced along with standard enhancements in this release.

TARGET AUDIENCE
ASTRO® 25 Customers

COURSE OBJECTIVES
At the end of this course, you should be able to:
• Identify changes as a result of the upgrade early to more easily manage the changes.
• Identify operational procedures that will go away as a result of the upgrade.
• Identify operational procedures that will change as a result of the upgrade.
• Identify new operational procedures that will be available as a result of the upgrade.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None
COURSE OVERVIEW
This course describes the new features and feature enhancements introduced in the ASTRO® 25 2019.2 system release. Optional features are introduced along with standard enhancements in this release.

TARGET AUDIENCE
Technical Support Staff who need to get an awareness of the new features of the ASTRO® 25 Release 2019.2.

COURSE OBJECTIVES
At the end of this course, you should be able to:
• Identify and describe ASTRO® 25 2019.2 new features and their system dependencies.
• Identify changes as a result of the upgrade early to more easily manage the changes.
• Identify operational procedures that will go away as a result of the upgrade.
• Identify operational procedures that will change as a result of the upgrade.
• Identify new operational procedures that will be available as a result of the upgrade.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
This course provides a high-level overview of the Motorola Radio System Management applications through recorded demonstrations of common system tasks.

TARGET AUDIENCE
System Managers, Technical System Managers, System Technicians, and other Application Users

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the purpose of Network Management applications used in an ASTRO system.
• Identify high-level capabilities of those Network Administrator applications.
• Familiarize with common operations allowed by those Network Administrator applications.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience:
• ACT100E Bridging the Knowledge Gap - Technicians
• AST1038 ASTRO® 25 IV&D System Overview
• AST4103 ASTRO® 25 IV&D System Core Workshop

PREREQUISITES
None

NEW FEATURES FOR ASTRO® 25 2019.2
COURSE OVERVIEW
2 HRS
AST0081

ASTRO® 25 IV&D INTRODUCTION TO RADIO SYSTEM MANAGEMENT APPLICATIONS
COURSE OVERVIEW
1 DAY
AST1074
<table>
<thead>
<tr>
<th>COURSE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMETRA X CORE D9.1 SYSTEM OVERVIEW (DMT9100)</td>
<td>39</td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 CONFIGURATION AND ADMINISTRATION WORKSHOP</td>
<td>39</td>
</tr>
<tr>
<td>(DMT9101)</td>
<td></td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 FAULT MANAGEMENT WORKSHOP (DMT9102)</td>
<td>39</td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 PERFORMANCE MANAGEMENT WORKSHOP (DMT9103)</td>
<td>40</td>
</tr>
<tr>
<td>(DMT9104)</td>
<td></td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 TROUBLESHOOTING AND MAINTENANCE WORKSHOP</td>
<td>40</td>
</tr>
<tr>
<td>(DMT9105)</td>
<td></td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND</td>
<td>40</td>
</tr>
<tr>
<td>PROVISIONING (DMT9105)</td>
<td></td>
</tr>
<tr>
<td>DIMETRA X CORE SECURE COMMUNICATIONS WORKSHOP (DMT1094)</td>
<td>41</td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 NETWORK SECURITY (DMT9106)</td>
<td>41</td>
</tr>
<tr>
<td>(DMT9107)</td>
<td></td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 DISPATCH COMMUNICATIONS SERVER WORKSHOP</td>
<td>41</td>
</tr>
<tr>
<td>(DMT9108)</td>
<td></td>
</tr>
<tr>
<td>DIMETRA X CORE D9.1 MSO RESTORATION TRAINING (DMT9108)</td>
<td>42</td>
</tr>
<tr>
<td>DIMETRA EXPRESS INSTALLATION, CONFIGURATION AND MAINTENANCE WORKSHOP</td>
<td>42</td>
</tr>
<tr>
<td>(DMT0036)</td>
<td></td>
</tr>
<tr>
<td>DIMETRA EXPRESS REDUNDANT SYSTEM DESIGN, INSTALLATION,</td>
<td>42</td>
</tr>
<tr>
<td>CONFIGURATION, AND MAINTENANCE (DMT0038)</td>
<td></td>
</tr>
</tbody>
</table>
DIMETRA MSO SYSTEM ENGINEER

DIMETRA X CORE D9.1 SYSTEM OVERVIEW
3 DAYS
DMT9100

DIMETRA X CORE D9.1 CONFIGURATION AND ADMINISTRATION WORKSHOP
4 DAYS
DMT9101

DIMETRA X CORE D9.1 FAULT MANAGEMENT WORKSHOP
3 DAYS
DMT9102

DIMETRA X CORE D9.1 TROUBLESHOOTING AND MAINTENANCE WORKSHOP
5 DAYS
DMT9104

DIMETRA X CORE D9.1 PERFORMANCE MANAGEMENT WORKSHOP
3 DAYS
DMT9103

OPTIONAL TRAINING

DIMETRA X CORE D9.1 SECURE COMMUNICATIONS WORKSHOP
3 DAYS
DMT9105

DIMETRA X CORE D9.1 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING
3 DAYS
DMT1094

SECURE COMMUNICATIONS

ENCRYPTION, AUTHENTICATION & PROVISIONING
DIMETRA FIELD ENGINEER

DIMETRA X CORE D9.1 SYSTEM OVERVIEW
3 DAYS
DMT9100

MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE WORKSHOP
3 DAYS
TBTS04

DIMETRA X CORE D9.1 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING
3 DAYS
DMT9105

MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE WORKSHOP
4 DAYS
TBTS01

MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE WORKSHOP
DIMETRA SYSTEM ADMINISTRATOR

DIMETRA X CORE D9.1 SYSTEM OVERVIEW
3 DAYS
DMT9100

DIMETRA X CORE D9.1 CONFIGURATION AND ADMINISTRATION WORKSHOP
4 DAYS
DMT9101

DIMETRA X CORE D9.1 FAULT MANAGEMENT WORKSHOP
3 DAYS
DMT9102

DIMETRA X CORE D9.1 PERFORMANCE MANAGEMENT WORKSHOP
3 DAYS
DMT9103

OPTIONAL TRAINING

DIMETRA X CORE SECURE COMMUNICATIONS WORKSHOP
3 DAYS
DMT1094

DIMETRA X CORE D9.1 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING
3 DAYS
DMT9105
DIMETRA DISPATCH ADMINISTRATOR

- **DIMETRA X CORE D9.1 SYSTEM OVERVIEW**
  - 3 DAYS
  - DMT9100

- **DIMETRA X CORE D9.1 MCC 7500 OPERATOR WORKSHOP**
  - 1 DAY
  - DMT9112

- **DIMETRA X CORE D9.1 MCC 7500 ADMIN WORKSHOP**
  - 1 DAY
  - DMT9111

- **DIMETRA X CORE D9.1 MCC 7500 INSTALL, CONFIG, TROUBLESHOOTING, AND MAINTENANCE**
  - 3 DAYS
  - DMT9113

**OPTIONAL TRAINING**

- **DIMETRA X CORE SECURE COMMUNICATIONS WORKSHOP**
  - 3 DAYS
  - DMT1094

- **DIMETRA X CORE D9.1 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING**
  - 3 DAYS
  - DMT9105
DIMETRA DISPATCH OPERATOR

DIMETRA X CORE D9.1 SYSTEM OVERVIEW
DMT9100
3 DAYS

DIMETRA X CORE D9.1 MCC 7500 OPERATOR WORKSHOP
DMT9112
1 DAY
COURSE OVERVIEW
This course provides an overview of the features and functions of a DIMETRA X Core system. The course includes descriptions of the various call types and system hardware functionality. Applications overview describes the purpose of the software used to manage and administer the system.

TARGET AUDIENCE
All staff who require an overview of the DIMETRA X Core system functionality and features.

COURSE OBJECTIVES
By the end of the course, the student will be able to:
• Describe Basic Radio concepts.
• Describe DIMETRA X Core benefits.
• Describe DIMETRA X Core features and their benefits.
• Describe DIMETRA X Core Single Zone system components and their functionality.
• Describe the purpose and function of DIMETRA X Core Network Management applications.
• Describe DIMETRA X Core Multi-Zone system components and their functionality.
• Describe DIMETRA X Core Inter-System Interface functionality.
• Describe how different types of calls are processed through a DIMETRA X Core system.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

DIMETRA X CORE D9.1 SYSTEM OVERVIEW
DMT9100
3 DAYS

DIMETRA X CORE D9.1 CONFIGURATION AND ADMINISTRATION WORKSHOP
DMT9101
4 DAYS

DIMETRA X CORE D9.1 FAULT MANAGEMENT WORKSHOP
DMT9102
3 DAYS

COURSE OVERVIEW
During this workshop delegates will use configuration and administration applications to manage a DIMETRA X Core system as they would on a daily basis. The delegates will perform configuration set up procedures for the more popular features and functions as well as common administration tasks, based on real business scenarios.

TARGET AUDIENCE
System managers responsible for configuration and administration of a DIMETRA X Core system.

COURSE OBJECTIVES
By the end of the course, the student will be able to:
• Describe the purpose of Configuration Management and Server Administration within your DIMETRA X Core system.
• Describe fleetmapping and home zone map function.
• Perform configuration procedures using UCM.
• Perform configuration procedures using ZCM.
• Perform configuration procedures using RCM.
• Perform Network Management Server Administration tasks.
• Explain the importance of daily operational tasks.
• Perform server database administration tasks.

Completion of the following course(s) or equivalent experience:
• DMT9100 DIMETRA X Core D9.1 System Overview

PREREQUISITES
None

COURSE OVERVIEW
The workshop will allow delegates to use applications to identify faults on systems components using a live DIMETRA X Core system and within the context of business scenarios.

TARGET AUDIENCE
System operations staff and field engineers who perform fault management tasks on a DIMETRA X Core system.

COURSE OBJECTIVES
By the end of the course, the student will be able to:
• Define the role of Fault Management within Network Management.
• Define the role of each of the applications used within Fault Management.
• Utilise the Unified Event Manager (UEM) application to assist Fault Management within the DIMETRA X Core system.
• Use the Transport Network Device Manager (TNDM) to assist Fault Management.
• Use the Zone Configuration Manager application to perform diagnostic functions within the DIMETRA X Core system.
• Use the Zone Watch application to assist Fault Management within the DIMETRA X Core system.
• Identify file backup procedures.

Completion of the following course(s) or equivalent experience:
• DMT9100 DIMETRA X Core D9.1 System Overview

PREREQUISITES
None
**DIMETRA X CORE D9.1 PERFORMANCE MANAGEMENT WORKSHOP**

**COURSE OVERVIEW**
During this workshop delegates will use applications on a live DIMETRA X Core system using business scenarios. Using these applications delegates will learn how to interpret system and user performance based on call traffic and device statistics.

**TARGET AUDIENCE**
System operators and managers who monitor and collect system statistics on a DIMETRA X Core system.

**COURSE OBJECTIVES**
By the end of the course, the student will be able to:
- Describe the factors that affect system performance.
- Describe the Performance Management Analysis process.
- List the Performance Management applications used in a DIMETRA X Core system.
- Describe the purpose of system reports, system usage applications and device statistics in Performance Management activities.
- Access and navigate DIMETRA X Core Performance Management applications to monitor system activity and generate system reports.

**REQUISITE KNOWLEDGE**
Completion of the following course(s) or equivalent experience:
- DMT9100 DIMETRA X Core D9.1 System Overview

**PREREQUISITES**
None

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**DIMETRA X CORE D9.1 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING**

**COURSE OBJECTIVES**
By the end of the course, the student will be able to:
- Describe how Air Interface Encryption and Authentication work within the DIMETRA X Core system.
- Describe the hardware components used in Encryption and Authentication.
- Describe distribution, storage, key updates and key management of Air Interface Encryption and Authentication keys.
- Perform Encryption Key management procedures using the Enhanced AuC, PrC, and KVL system components.

**REQUISITE KNOWLEDGE**
Completion of the following course(s) or equivalent experience:
- DMT9100 DIMETRA X Core D9.1 System Overview

**PREREQUISITES**
None

---

**DIMETRA X CORE D9.1 TROUBLESHOOTING AND MAINTENANCE WORKSHOP**

**COURSE OVERVIEW**
During this workshop delegates will troubleshoot and maintain a live DIMETRA X Core system using business scenarios, troubleshooting procedures and diagnostic applications. Delegates will also perform complex FRU/FRE procedures to resolve hardware faults.

**TARGET AUDIENCE**
System and Field Engineers who troubleshoot and maintain a DIMETRA X Core system.

**COURSE OBJECTIVES**
By the end of the course, the student will be able to:
- Describe troubleshooting model process, system support tools and technical support services provided by Motorola Solutions.
- Describe the DIMETRA X Core system architecture.
- Perform troubleshooting procedures using system troubleshooting tools.
- Perform recommended routine maintenance procedures for a DIMETRA X Core system.
- Perform replacement procedures and reconfigure faulty Field Replaceable Units (FRUs) and Field Replaceable Equipment/Entities (FREs) within a DIMETRA X Core system.
- Perform verification procedures on FRU/FRE replacement.

**REQUISITE KNOWLEDGE**
Completion of the following course(s) or equivalent experience:
- DMT9100 DIMETRA X Core D9.1 System Overview
- DMT9102 DIMETRA X Core D9.1 Fault Management Workshop

**PREREQUISITES**
None
COURSE OVERVIEW
During the workshop delegates will perform key management, administrative and maintenance tasks on a live DIMETRA X Core system. Using real business scenarios this workshop will allow delegates to perform key management, key transference, maintenance, and troubleshooting procedures on the Key Management Facility (KMF) server and client.

TARGET AUDIENCE
System operators, managers and field technicians responsible for the management and maintenance of secure end-to-end communications in a DIMETRA X Core system.

COURSE OBJECTIVES
By the end of the course, the student will be able to:
• Describe the generic threats to network security.
• Describe the DIMETRA X Core antivirus protection.
• Describe the DIMETRA X Core authentication management.
• Describe the perimeter protection available with the DIMETRA X Core system.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• DMT9100 DIMETRA X Core D9.1 System Overview

PREREQUISITES
None

COURSE OVERVIEW
This workshop provides an overview of the DIMETRA Dispatch Communications Server as well as hands on activities in terms of configuration, administration, troubleshooting and maintenance aspects of the DCS server and DCS clients.

TARGET AUDIENCE
Field and system engineers who support the DCS solution.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe DCS functionality, topology, components and client connectivity.
• Describe DCS solution system limits, throughput and performance.
• Describe how DCS solution is incorporated in DIMETRA call processing.
• Perform configuration of DCS solution components.
• Administer and maintain the DCS solution.
• Perform diagnostic and troubleshooting activities for the DCS solution.
• Perform restoration procedures for DCS solution components in the event of failure.

REQUISITE KNOWLEDGE
None

PREREQUISITES
• DMT9100 DIMETRA X Core D9.1 System Overview
• DMT9101 DIMETRA X Core D9.1 Configuration and Administration Workshop
COURSE OVERVIEW
During this workshop delegates will perform complete hardware, software and database restorations for DIMETRA X Core. The tasks will be carried out in a lab environment through hands-on activities according to the procedures and guidelines from system documentation.

TARGET AUDIENCE
Staff who troubleshoots and maintains a DIMETRA X Core system.

COURSE OBJECTIVES
By the end of the course, the student will be able to:
• Restore a DIMETRA X Core System.
• Perform a complete system backup prior to re-installation
• Complete a system power down.
• Reinstall system hardware/software.
• Restore a system database and reconfigure the system back to original operating conditions.
• Perform a post-restoration check and test.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience may be required, depending on the system:
• DMT9105 DIMETRA X Core D9.1 Air Interface Encryption, Authentication, and Provisioning
• DMT9106 DIMETRA X Core D9.1 Network Security

PREREQUISITES
• DMT9100 DIMETRA X Core D9.1 System Overview
• DMT9101 DIMETRA X Core D9.1 Configuration and Administration Workshop
• DMT9102 DIMETRA X Core D9.1 Fault Management Workshop
• DMT9104 DIMETRA X Core D9.1 Troubleshooting and Maintenance Workshop

COURSE OVERVIEW
This course will give the opportunity to install and configure a DIMETRA Express system from start to finish. Learners will be able to carry out all of the necessary configuration activities required when commissioning a DIMETRA Express radio network.

TARGET AUDIENCE
Anyone who has responsibility for setting up or managing DIMETRA Express system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe DIMETRA Express main features and functionality.
• Install DIMETRA Express system.
• Setup a DIMETRA Express system.
• Setup and configure additional sites to the DIMETRA Express system.
• Configure a DIMETRA Express system using DIMETRA Express Network Manager application and procedures.
• Describe/Perform TETRA radio authentication process/provisioning in the DIMETRA Express system.
• Perform authentication application administration and management tasks.

REQUISITE KNOWLEDGE
A basic understanding of Radio Frequency (RF) technology and Internet Protocol (IP) fundamentals.

PREREQUISITES
None

COURSE OVERVIEW
This course will show how to set up and configure geographical redundancy for a DIMETRA Express system. It will give the opportunity for individuals to learn how to install, configure and maintain redundancy within a DIMETRA Express system.

TARGET AUDIENCE
System Managers/Staff responsible for setting-up, configuring, administrating, and maintaining the DIMETRA Express system and MTS equipment.

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Explain the principles of geographical redundancy.
• Describe DIMETRA Express redundancy features and functionalities.
• Setup and configure geographical redundancy within a DIMETRA Express system to automatically switch over in the event of a system failure.
• Carry out all maintenance procedures relating to redundancy.

REQUISITE KNOWLEDGE
Basic knowledge of installation, configuration and maintenance.

PREREQUISITES
None
## Console Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Enablement for MCC 5500 Dispatch Console (CON007)</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>MCD 5000 Technical Workshop (RDS1022)</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>MCC 7000 Series Dispatch Consoles Workshop (CON012)</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Dimetra X Core D9.1 MCC 7500 Admin Workshop (DMT9111)</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Dimetra X Core D9.1 MCC 7500 Operator Workshop (DMT9112)</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Dimetra X Core D9.1 MCC 7500 Install, Config, Troubleshooting, and Maintenance (DMT9113)</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>

**MCC 7000 Series Dispatch Consoles Workshop (CON012) focuses on the consoles application in an M- or L-core system.**
CONSOLES TECHNICAL TRAINING CURRICULUM

ASTRO® 25 IV&D SYSTEM OVERVIEW
2.5 HRS
AST1038

MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP
5 DAYS
CON012

CURRICULUM COMPLETE

PARTICIPANT CAN MAINTAIN A MCC 7000 DISPATCH CONSOLE SITE INCLUDING: CONSOLE PC, VPM, CC GW’S AND AUX I/O SERVERS.
*PARTICIPANT PERFORMS TROUBLESHOOTING AND REPLACEMENT OF SITE DEVICES DURING COURSE.

OPTIONAL CONSOLE TRAINING

MCD 5000 TECHNICAL WORKSHOP
3 DAYS
RDS1022
COURSE OVERVIEW

This course familiarizes participants in installation, configuration, management and repair of MCC 5500 dispatch consoles, available documentation, Console System Database Manager (CSDM), system architecture, components and peripherals. The focus is on a detailed discussion of console hardware and hands-on activities with the installation and configuration of the MCC 5500 Console.

TARGET AUDIENCE

System Managers, Console Technicians

COURSE OBJECTIVES

By the end of the course, you will be able to:

• Calculate hardware required for an installation
• Install and configure all of the relevant hardware
• Test, troubleshoot and configure system components
• Build, modify, load and troubleshoot a system database
• Configure and modify operator screens

REQUISITE KNOWLEDGE

• Basic two-way FM communications theory and logic circuits
• Communication Systems Concepts (NST021)
• Experience using common communication test equipment

PREREQUISITES

None

COURSE OVERVIEW

This course supports those that install, configure, or support the MCC 5500 Desks. This three day training course will cover installation procedures for the MCC5500 Deskset, Radio Gateway Unit (RGU), and connectivity to different station types. Configuration and programming of the MCC5500 and its supporting equipment will be covered through discussion and hands-on lab activities. Troubleshooting and maintenance techniques will be addressed to the Motorola Solutions recommended service level.

TARGET AUDIENCE

MCD 5000 Technicians

COURSE OBJECTIVES

By the end of the course, you will be able to:

• Identify the MCD 5000 System components and functions.
• Install MCC 5500 Desks.
• Install Radio Gateway Units.
• Configure MCD 5000 subcomponents.
• Troubleshoot the MCD 5000 System to Motorola Solutions recommended service levels.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

• NST021 Communication Systems Concepts

PREREQUISITES

None

COURSE OVERVIEW

This course familiarizes participants in installation, configuration, management and repair of MCC 7000 Series Dispatch Consoles, Archiving Interface Servers, AUX I/O servers, and Conventional Channel Gateways. The focus is on a detailed discussion of console hardware and hands-on activities with the installation and configuration of the MCC 7000 Series Dispatch Consoles.

TARGET AUDIENCE

System Administrators, Console Technicians

COURSE OBJECTIVES

After completing this course, the participant will be able to:

• Understand key physical and functional characteristics of MCC 7000 Series Dispatch Consoles.
• Understand physical installation requirements of MCC 7000 Series Dispatch Consoles.
• Perform tasks necessary to install MCC 7000 Series Dispatch Consoles components.
• Perform configuration steps for MCC 7000 Series Dispatch Consoles components.
• Understand available maintenance tools and indicators in MCC 7000 Series Dispatch Consoles.
• Perform routine maintenance activities in MCC 7000 Series Dispatch Consoles components.
• Troubleshoot MCC 7000 Series Dispatch Consoles components to the Motorola Solutions recommended service level.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

• ACT100E or ACT101E Bridging the Knowledge Gap
• NST762 Networking Essentials in Communication Equipment
• NWT003 ASTRO® 25 Systems Applied Networking

PREREQUISITES

• ACT1038 ASTRO® IV&D System Overview
COURSE OVERVIEW
This course provides students with an introduction to the Elite Admin application. It enables system administrators to use the software to set up configurations for the Elite Dispatch desktops that organize resources to meet specific user needs. Through facilitation and hands-on activities, the user learns how the configurations created in the Elite Admin can be saved and then distributed among the Elite Dispatch desktops.

TARGET AUDIENCE
System Administrators for Dispatch Console Operators.

COURSE OBJECTIVES
By the end of the course, the student will be able to:
- Identify the hardware components that make up the dispatcher position.
- Describe the purpose of the Elite Dispatch application.
- Identify elements that make up the menu and toolbar structure within the Elite Dispatch software.
- Perform dispatcher operations:
  - Communicate with radios: transmit and receive calls within group and individual communications categories.
  - Perform advanced signaling features, i.e. Quicklists, Emergency call and alarms, Ambience Listening calls.
  - Perform basic procedures within screen configurations, i.e. expanding and compressing resources, adjusting volume.
  - Perform basic procedures within resource groups, i.e. multiselect or patch group, APB and patch transmit.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
- DMT9112 DIMETRA X Core D9.1 MCC 7500 Operator Workshop

PREREQUISITES
None

COURSE OVERVIEW
This course provides students with an introduction to the dispatch console, its basic operation and tailored job aids which will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation.

TARGET AUDIENCE
Dispatch console operators.

COURSE OBJECTIVES
By the end of the course, the student will be able to:
- Identify the hardware components that make up the dispatcher position.
- Describe the purpose of the Elite Dispatch application.
- Identify elements that make up the menu and toolbar structure within the Elite Dispatch software.
- Perform dispatcher operations:
  - Communicate with radios: transmit and receive calls within group and individual communications categories.
  - Perform advanced signaling features, i.e. Quicklists, Emergency call and alarms, Ambience Listening calls.
  - Perform basic procedures within screen configurations, i.e. expanding and compressing resources, adjusting volume.
  - Perform basic procedures within resource groups, i.e. multiselect or patch group, APB and patch transmit.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None
## BASE STATIONS COURSES

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING &amp; MAINTENANCE WORKSHOP (TBTS01)</td>
<td>48</td>
</tr>
<tr>
<td>MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE (TBTS04)</td>
<td>48</td>
</tr>
<tr>
<td>STANDALONE GTR8000 CONVENTIONAL BASE RADIO (AST2006)</td>
<td>48</td>
</tr>
</tbody>
</table>
MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE WORKSHOP

4 DAYS TBS01

COURSE OVERVIEW
This course includes the theoretical and practical aspects of configuring, maintaining and troubleshooting the MTS base station in a DIMETRA IP system. The course includes the practical use of service software and the man-machine interface. Practical sessions include the removal and replacement of Field Replaceable Units (FRU).

TARGET AUDIENCE
Field Engineers responsible for installing and maintaining the base station equipment.

COURSE OBJECTIVES
By the end of the course, you will be able to:
- Describe the function of the MTS within a DIMETRA IP system.
- Identify the Field Replaceable Units (FRUs) within the MTS.
- Describe the function of FRUs within the MTS.
- Perform MTS installation procedures.
- Carry out removal and replacement procedures for MTS FRUs.
- Identify FRU part numbers.
- Utilise the Software Download application.
- Perform maintenance and testing procedures using Motorola TETRA BTS Service Software.
- Download a configuration file to the MTS using the BTS Service Software and Software Download Manager applications.
- Perform Ki loading procedures to the MTS.
- Troubleshoot MTS to FRU level.

REQUISITE KNOWLEDGE
- RF and Field or Bench service background.
- Completion of a DIMETRA System Overview course or equivalent experience is recommended.

PREREQUISITES
None

MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE

3 DAYS TBS04

COURSE OVERVIEW
This course includes the theoretical and practical aspects of configuring, maintaining and troubleshooting the MTS 1 base station in a DIMETRA IP system. The course includes the practical use of service software and the man-machine commands. Practical sessions include the testing and configuration of the MTS 1.

TARGET AUDIENCE
Field Engineers responsible for installing and configuring and maintaining MTS 1 equipment.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe the function of the MTS 1 within a DIMETRA IP system.
- Identify and describe the function of MTS 1 components.
- Describe MTS 1 installation procedures.
- Execute MMI commands using local and telnet access.
- Perform MTS 1 verification test procedures.
- Download configuration and application files using the BTS Service Software and Software Download Manager application.
- Perform MTS 1 Ki loading procedures.
- Perform MTS 1 troubleshooting using BTS Service Software.

REQUISITE KNOWLEDGE
- RF and Field or Bench service background - recommended

PREREQUISITES
None

STANDALONE GTR8000 CONVENTIONAL BASE RADIO

2 DAYS AST2006

COURSE OVERVIEW
This course is designed to give the participants the ability to align, troubleshoot and repair the Standalone GTR8000 Base Station/Repeater to Motorola Solutions recommended service levels. Emphasis is placed on the use of Configuration Service Software (CSS) and its role in configuration, maintenance, diagnostics, alignments, and optimization of the Standalone GTR8000 Base Radio/Repeater.

TARGET AUDIENCE
Maintenance Technicians

COURSE OBJECTIVES
By the end of the course, you will be able to:
- Understand basic concepts of the various radio systems supported by the GTR8000 Conventional Base Radio
- Identify the equipment modules of the GTR8000 Conventional Base Radio
- Operate and perform routine maintenance on the GTR8000 Conventional Base Radio
- Understand basic operational theory of GTR8000 Conventional Base Radio components
- Configure the GTR8000 Conventional Base Radio using Configuration Service Software (CSS)
- Identify the different backplane connections on the GTR8000 Conventional Base Radio
- Perform calibration and alignment adjustments for the GTR8000 Conventional Base Radio
- Troubleshoot problems and identify/replace faulty modules in the GTR8000 Conventional Base Radio

REQUISITE KNOWLEDGE
General RF knowledge and skills basic knowledge of two-way radio systems

PREREQUISITES
None
## SUBSCRIBER COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TETRA SUBSCRIBER END-USER OPERATOR COURSES</td>
<td>50</td>
</tr>
<tr>
<td>TETRA TERMINAL PROGRAMMING COURSE (CPS PLUS) (TTER01PLUS)</td>
<td>51</td>
</tr>
<tr>
<td>TETRA SUBSCRIBER OPERATOR, PROGRAMMING AND MAINTENANCE (DMT1107)</td>
<td>51</td>
</tr>
<tr>
<td>CPS PROGRAMMING AND TEMPLATE BUILDING OVERVIEW (ADT001V)</td>
<td>51</td>
</tr>
<tr>
<td>XTS/XTL TECHNICAL SUBSCRIBER ACADEMY (ADST005)</td>
<td>52</td>
</tr>
<tr>
<td>APX™ TECHNICAL SUBSCRIBER ACADEMY (APX010)</td>
<td>52</td>
</tr>
<tr>
<td>APX™ CPS PROGRAMMING AND TEMPLATE BUILDING (APX7001V)</td>
<td>52</td>
</tr>
<tr>
<td>APX™ RADIO MANAGEMENT WORKSHOP (RDS2017)</td>
<td>53</td>
</tr>
<tr>
<td>MOTOTRBO™ RADIO MANAGEMENT WORKSHOP (PCT2022)</td>
<td>53</td>
</tr>
<tr>
<td>MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY (TBO300)</td>
<td>53</td>
</tr>
</tbody>
</table>
TETRA SUBSCRIBER END-USER OPERATOR COURSES

Click the boxes below to go to the LXP to get additional information and to register for the following subscriber courses. The course description to the right applies to all courses listed below.

**COURSE OVERVIEW**
Our subscriber end-user operator courses will provide the background information and the knowledge required to allow delegates to be fully conversant with the features and functions of their chosen subscriber. It will provide users with an introduction to their subscriber, its operation and builds on theoretical instruction with practical exercises designed to allow delegates to practice and confirm their understanding of all features and functions covered in the course.

**TARGET AUDIENCE**
Radio end-user operators

**COURSE OBJECTIVES**
The goal of End-User Operator courses is to enable the user to identify the features and functions of their chosen subscriber, to make calls and perform basic radio troubleshooting. After completing any of these courses, the student will be able to:
- Identify the location and function of all subscriber keys and controls.
- Describe radio preparation including assembly and battery charging.
- Make all available Trunked Mode and Direct Mode calls.
- List optional features available to the subscriber.
- Perform basic subscriber troubleshooting.

**REQUISITE KNOWLEDGE**
None

**PREREQUISITES**
None

**OTHER SUBSCRIBER COURSES**
Click the box below to go to the LXP to get additional information and to register for the following course:

**TETRA TERMINAL PROGRAMMING (CPS PLUS)**
2 DAYS
TTER01PLUS
COURSE OVERVIEW
This course will provide the background information and the knowledge required to program Motorola Solutions TETRA radios. The course is highly practical in nature and covers everything from software requirements and installation, through to programming and editing radio codeplugs, and troubleshooting.

TARGET AUDIENCE
Technical staff required to program Motorola Solutions TETRA radios.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Identify and locate all program features.
- Describe the function of all major CPS Plus features and tools.
- Installation of the CPS and adding RPK files.
- Carry out radio programming using CPS Plus.
- Carry out CPS Plus troubleshooting procedures.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
This practical course will provide assistance to TETRA radio users, diagnose radio problems both locally and remotely. Program the radio for end users operations and provide first line maintenance for suspected faulty radios.

TARGET AUDIENCE
Technicians and personnel who will be involved in programming and maintaining to level 1.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Locate and use all MTP6650 and MTM5400 controls.
- Execute trunked and direct mode calls using the MTP6650 and MTM5400 radios.
- Carry out radio troubleshooting using built-in diagnostics.
- Describe the function of Motorola CPS Plus software.
- Create a user codeplug and program the codeplug into an MTP6650 and MTM5400 radio.
- Carry out software troubleshooting using CPS Plus.
- Carry out configuration for collaborative devices.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

COURSE OVERVIEW
This course provides communications management personnel and technicians with the knowledge and tools needed to program the radio units in the most efficient way depending on the system, features and options they require. The parameters and exercises shown in the class apply to a wide number of portable and mobile radios, including XTS 5000, XTS 3000, XTS 2500, XTS 1500, XTL 5000, XTL 2500, XTL 1500, MTS 2000, MCS 2000, the SPECTRA family, and the Professional Series.

TARGET AUDIENCE
Radio Technicians, System Managers

COURSE OBJECTIVES
By the end of the course, you will be able to:
- Program the basic parameters of any radio using the Customer Programming Software (CPS)
- Program the specific parameters of any radio related to the system where the user is going to work conventional, single-site trunking, Simulcast, AMSS, SmartZone or ASTRO 25
- Demonstrate knowledge of the options and features that can be programmed in a radio
- Create templates for subscriber programming in a system
- Create templates for the programming of subscribers in a system.

REQUISITE KNOWLEDGE
Knowledge of the basic features and options of two-way radios and the basic concepts of trunking

PREREQUISITES
None
COURSE OVERVIEW
Participants will learn the capabilities, features, and functions of the APX family of radios as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance and troubleshooting. This Academy will also focus on the detailed theory of operation.

TARGET AUDIENCE
Radio Technicians, System Managers

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Distinguish between the features and specifications of APX Portable and Mobile radios
• Verify the correct operation of the various radios within the APX family of subscribers by completing Performance Checks and Alignment procedures
• Disassemble and reassemble APX radios using the documented procedures
• Maintain and troubleshoot radios within the APX family of subscribers

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience:
• NST021 Communication Systems Concepts
• APX010 APX™ Technical Subscriber Academy Overview
• ADT001V CPS Programming and Template Building Overview
• ADT001T Test Out CPS Programming and Template Building Overview

PREREQUISITES
None.
APX™ RADIO MANAGEMENT WORKSHOP
RDS2017
3 DAYS

COURSE OVERVIEW
Participants will learn the capabilities, features, and functions of the APX Radio Management Suite. This course covers an APX CPS overview, APX Radio Management Overview, Basic Networking Primer, ASTRO25/CEN Networking and UNS Overview, and APX Radio Management Installation, Configuration, and Operations. In addition, the course contains labs that focus on installation, configuration, and operation using both wired and POP25 updates to APX Subscriber radios in both a LAN and WAN environment.

TARGET AUDIENCE
Radio Technicians, System Managers, Radio Programmers

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe the APX Radio Management Suite operations and required software and hardware components
- Describe all deployment options for APX Radio Management Suite
- Configure a basic APX Radio Management system using a single PC, multiple PCs on a LAN, and multiple PCs on a WAN.
- Troubleshoot common APX Radio Management installation, configuration, and operation issues

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience:
- APX7001V APX CPS Programming and Template Building Overview

PREREQUISITES
None

MOTOTRBO™ RADIO MANAGEMENT WORKSHOP
PCT2022
2 DAYS

COURSE OVERVIEW
The MOTOTRBO™ Radio Management 2.0 Workshop course provides technicians with the necessary information and practice to use the MOTOTRBO™ Radio Management 2.0 programming tool effectively.

TARGET AUDIENCE
System Managers and Technicians

COURSE OBJECTIVES
By the end of the course, you will be able to:
- Deploy and use RM 2.0 in a variety of real-world scenarios.
- Create and maintain configurations for basic MOTOTRBO™ Configurations (Connect Plus and Capacity Max excluded).
- Utilize Wi-Fi programming within RM 2.0.
- Use the RM Import and Export feature for database population.
- Convert existing radio templates and codeplugs to RM 2.0 Configurations.
- License and activate Radio and Application features.
- Use advanced features such as Data Mining.
- Use RM 2.0 to ease mass-deployments of subscribers.

REQUISITE KNOWLEDGE
Networking Essentials or Network + Certification.
- A high-level working knowledge of IP networking is important.

PREREQUISITES
PCT1032 MOTOTRBO™ Radio Management 2.0 Configuration Mode

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
- CEDMEL2000 MOTOTRBO™ System Introduction for Technicians

PREREQUISITES
None
# MOTOTRBO™ COURSES

<table>
<thead>
<tr>
<th>COURSE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOTOTRBO™ CAPACITY MAX TECHNICAL OVERVIEW (PCT1047)</td>
<td>57</td>
</tr>
<tr>
<td>MOTOTRBO™ CAPACITY MAX THEORY OF OPERATION (PCT1046)</td>
<td>57</td>
</tr>
<tr>
<td>MOTOTRBO™ RADIO MANAGEMENT 2.0 CONFIGURATION MODE (PCT1032)</td>
<td>57</td>
</tr>
<tr>
<td>MOTOTRBO™ RADIO MANAGEMENT WORKSHOP (PCT2022)</td>
<td>58</td>
</tr>
<tr>
<td>MOTOTRBO™ CAPACITY MAX DESIGN AND DEPLOY (PCT2010)</td>
<td>58</td>
</tr>
<tr>
<td>MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS (CEDMEL2000)</td>
<td>58</td>
</tr>
<tr>
<td>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS TECHNICAL OVERVIEW (PCT1066)</td>
<td>59</td>
</tr>
<tr>
<td>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS THEORY OF OPERATIONS AND DESIGN (PCT2023)</td>
<td>59</td>
</tr>
<tr>
<td>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS SYSTEMS WORKSHOP (PCT3014)</td>
<td>59</td>
</tr>
</tbody>
</table>
MOTOTRBO™ TECHNICAL TRAINING CURRICULUM

DO YOU UNDERSTAND IP?

- YES
- NO

BASIC NETWORKING
1 HR
RDS0003

MOTOTRBO™ SYSTEMS APPLIED NETWORKING
4 DAYS
PCT2007

CHOOSE YOUR SPECIALIZED SYSTEM TRAINING

CAPACITY MAX

MOTOTRBO™ CAPACITY MAX TECHNICAL OVERVIEW
2 HRS
PCT1047

MOTOTRBO™ CAPACITY MAX THEORY OF OPERATION
1 HR
PCT1046

MOTOTRBO™ RADIO MANAGEMENT 2.0 CONFIGURATION MODE
1 HR
PCT1032

MOTOTRBO™ DESIGN AND DEPLOY FOR CAPACITY MAX
5 DAYS
PCT2010

DO YOU HAVE MOTOTRBO™ EXPERIENCE?

- YES
- NO

MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS
2 DAYS
CEDMEL2000

MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS TECHNICAL OVERVIEW
1.5 HRS
PCT1066

MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS THEORY OF OPERATION
1 HR
PCT1047

MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS THEORY OF OPERATIONS AND DESIGN
1 DAY
PCT2023

MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS SYSTEMS WORKSHOP
4 DAYS
PCT3014

CURRICULUM COMPLETE

PARTICIPANT SHOULD BE ABLE TO DESCRIBE THE KEY CHARACTERISTICS OF THE SYSTEM, DESCRIBE THE KEY CONFIGURATION ITEMS IN BOTH SUBSCRIBERS AND REPEATERS, PROGRAM EFFECTIVE REPEATER AND SUBSCRIBER CODEPLUG TEMPLATES FOR THE SYSTEM, AND DESCRIBE THE APPLICABLE IP NETWORKING REQUIREMENTS WHEN DESIGNING A SYSTEM.
MOTOTRBO™ TECHNICAL TRAINING CURRICULUM
FOR SUBSCRIBER/REPEATER MAINTENANCE TECHNICIAN

MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS
CEDMEL2000

MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY
TBO300

CURRICULUM COMPLETE
PARTICIPANT WILL LEARN THE COMMON MOTOTRBO™ FEATURES AND CAPABILITIES TO DESIGN AND DEPLOY MOTOTRBO™ SYSTEMS. PARTICIPANT SHOULD BE ABLE TO COMPLETE PERFORMANCE CHECKS, RADIO ALIGNMENTS, DISASSEMBLY/REASSEMBLY, MAINTENANCE, AND TROUBLESHOOTING OF VARIOUS MOTOTRBO™ RADIO TYPES.
**COURSE OVERVIEW**

This self-study course is designed to help you learn the fundamentals of Capacity Max. Whether you have a sales or technical background, this training will give you the information that you need to gain a basic understanding of Capacity Max. Begin by exploring the DMR standard and Capacity Max's positioning within the MOTOTRBO™ portfolio of systems. Learn about the different hardware and software components that make up a Capacity Max system and gain an understanding of its logical and physical topology. Features, redundancy, design tools and warranty will also be addressed.

**TARGET AUDIENCE**
Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

**COURSE OBJECTIVES**
Upon completion of this course, you will be able to describe and explain the functions of:
- Control Channel
- Roaming
- Radio Registration
- Call Request
- Call Setup
- Busy Queue
- Channel Allocation
- Call Termination

**REQUISITE KNOWLEDGE**
Basic Radio knowledge

**PREREQUISITES**
None
**Course Overview**
The MOTOTRBO™ Radio Management 2.0 Workshop course provides technicians with the necessary information and practice to use the MOTOTRBO™ Radio Management 2.0 programming tool effectively.

**Target Audience**
System Managers and Technicians

**Course Objectives**
By the end of the course, you will be able to:
- Deploy and use RM 2.0 in a variety of real-world scenarios.
- Create and maintain configurations for basic MOTOTRBO™ Configurations (Connect Plus and Capacity Max excluded).
- Utilize Wi-Fi programming within RM 2.0.
- Use the RM Import and Export feature for database population.
- Convert existing radio templates and codeplugs to RM 2.0 Configurations.
- License and activate Radio and Application features.
- Use advanced features such as Data Mining.
- Use RM 2.0 to ease mass-deployments of subscribers.

**Requisite Knowledge**
Networking Essentials or Network + Certification.
- A high-level working knowledge of IP networking is important.

**Prerequisites**
PCT1032 MOTOTRBO™ Radio Management 2.0 Configuration Mode
 COURSE OVERVIEW
This course is designed to help you understand the basics of a MOTOTRBO™ IP Site Connect and a MOTOTRBO™ Capacity Plus system. We’ll begin by exploring their capabilities, features and positioning within the MOTOTRBO™ system solutions. You will also learn about the different system components and their general topology. The course will also review available MOTOTRBO™ services packages.

TARGET AUDIENCE
Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Describe a MOTOTRBO™ IP Site Connect and Capacity Plus system.
• Explain the capabilities of the MOTOTRBO™ IP Site Connect and Capacity Plus system components.
• Identify the MOTOTRBO™ IP Site Connect and Capacity Plus system components.
• Identify a MOTOTRBO™ IP Site Connect and Capacity Plus topology.
• Explain the difference in service plans between these systems.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• Basic Radio knowledge
• CEDMEL2000 MOTOTRBO™ Systems Introduction for Technicians

PREREQUISITES
None

 COURSE OVERVIEW
This course is designed to help you gain a solid foundation and understanding of the theory behind how an IPSC and Capacity Plus system functions. It describes the life cycle of a call, repeater arbitration and Motorola’s proprietary Enhanced Channel Access (ECA) feature. In addition, you will learn about the different IPSC and Capacity Plus system design options, fleetmapping and the MOTORBO System Design Tool.

TARGET AUDIENCE
Professionals responsible for designing and deploying MOTOTRBO™ radio systems.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Explain the call processing methods.
• Define repeater arbitration, Enhanced Channel Access (ECA) and All Start.
• List the considerations that must be taken into account when designing a MOTOTRBO™ IP Site Connect, Capacity Plus Single-Site or Capacity Plus Multi-Site system.
• Use the MOTOTRBO™ System Design Tool to size the system.
• Explain the purpose of fleetmapping, how to conduct a fleetmap and its importance in system design.
• Illustrate possible system deployment topologies based on options selected.
• Describe the roaming process which helps to optimize User coverage.
• Describe Data capabilities.
• Understand the purpose and intent of voting repeaters and receivers.

REQUISITE KNOWLEDGE
• Basic Radio knowledge
• CEDMEL2000 MOTOTRBO™ Systems Introduction for Technicians
• PCT1066 MOTOTRBO™ IP Site Connect and Capacity Plus Technical Overview

PREREQUISITES
None

 COURSE OVERVIEW
This course allows the participant to acquire in-depth hands-on experience in planning, configuring, and deploying the following MOTOTRBO™ systems: Digital Conventional, IP Site Connect, Capacity Plus Single and Multi-Site. Under the Instructor’s guidance, participants will have the opportunity to practise designing and deploying the systems in a safe classroom environment. The course also provides information on the fleetmapping considerations together with exercises for each system type.

TARGET AUDIENCE
Professionals responsible for deploying MOTOTRBO™ radio systems.

COURSE OBJECTIVES
Upon completion of this course, the participant will be able to:
• Describe the MOTOTRBO™ IP Site Connect and Capacity Plus (Single and Multi-Site) systems, their capabilities, system components, and data application.
• Describe the MOTOTRBO™ IP Site Connect and Capacity Plus (Single and Multi-Site) theory of operation.
• Describe the available MOTOTRBO™ IP Site Connect and Capacity Plus (Single and Multi-Site) topologies.
• Take the steps needed to configure IP Site Connect and Capacity Plus (Single and Multi-Site) systems using MOTOTRBO™ CPS to program the subscribers and repeaters.

REQUISITE KNOWLEDGE
• Basic Radio knowledge

PREREQUISITES
• CEDMEL2000 MOTOTRBO™ System Introduction for Technicians
• PCT1066 MOTOTRBO™ IP Site Connect and Capacity Plus Technical Overview
• PCT2023 MOTOTRBO™ IP Site Connect and Capacity Plus Theory of Operations and Design
## SOFTWARE & APPLICATIONS

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAVE™ 5000 SYSTEM ADMINISTRATION (AST1035)</td>
<td>61</td>
</tr>
<tr>
<td>WAVE™ CERTIFIED INTEGRATION ENGINEER (AST3001)</td>
<td>61</td>
</tr>
<tr>
<td>WAVE™ PTX APPLICATION OVERVIEW (PSA0004L)</td>
<td>61</td>
</tr>
<tr>
<td>WAVE™ PTX DISPATCH OVERVIEW (PSA0017L)</td>
<td>62</td>
</tr>
<tr>
<td>WAVE™ PTX TWO-WAY RADIO OVERVIEW (PSA0018L)</td>
<td>62</td>
</tr>
<tr>
<td>WAVE™ PTX LMR INTEROPERABILITY TO MOTOTRBO™ (PSA1051L)</td>
<td>62</td>
</tr>
<tr>
<td>WAVE™ PTX ADMINISTRATOR (PSA2001L)</td>
<td>63</td>
</tr>
<tr>
<td>PREMIERONE APPLICATION INTEGRATION FOR FIELD RESPONDERS OVERVIEW (AST0015)</td>
<td>63</td>
</tr>
<tr>
<td>PREMIERONE SUITE HIGH LEVEL OVERVIEW (AST1015)</td>
<td>63</td>
</tr>
<tr>
<td>PREMIERONE CAD USER OVERVIEW (AST1022)</td>
<td>64</td>
</tr>
<tr>
<td>PREMIERONE MOBILE USER OVERVIEW (AST1023)</td>
<td>64</td>
</tr>
<tr>
<td>PREMIERONE RECORDS USER OVERVIEW (AST1024)</td>
<td>64</td>
</tr>
<tr>
<td>PREMIERONE JAIL USER OVERVIEW (AST1025)</td>
<td>65</td>
</tr>
<tr>
<td>INTELLIGENT MIDDLEWARE 5.2 OPERATION AND ADMINISTRATION (RDS2025)</td>
<td>65</td>
</tr>
</tbody>
</table>
COURSE OVERVIEW
This course provides an overview of the WAVE™ 5000 Solution, its features, hardware requirements, and software and is targeted to the Administrator role and support roles.

TARGET AUDIENCE
You should attend this training course if you are an Administrator or support personnel of a WAVE™ 5000 solution.

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Add, edit and delete Channels.
• Create, edit and delete Channel Groups.
• Perform administration tasks for Users, Profiles, and Subscribers Manage Media and Proxy Servers.
• Manage Console.
• Understand SIP.
• Describe what QoS is.
• Describe Morse Call Signs public safety feature
• View log entries and delete log records in System Log.
• Search, play, and download recordings.
• Add, change, and delete audio files.
• Describe the WAVE™ Database.
• Find answers to troubleshooting questions.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

SOFTWARE & APPLICATIONS
For information on prerequisites and to register for courses visit the LXP at: LEARNING.MOTOROLASOLUTIONS.COM

For general information contact the Latin America Education Services Help Desk at: training.lacr@motorolasolutions.com

COURSE OVERVIEW
This course provides an overview of the WAVE™ PTX PTT application. It offers guidelines for signing up for WAVE™ trial and includes demonstrations of how to make calls, share location, and send secure multimedia messages. It also explains how to use the latest features, such as Quick Group from Map, Geofencing, and Supervisory Override.

TARGET AUDIENCE
This training is intended for new WAVE™ PTX users who want to start using the application and get familiar with its interface and features.

COURSE OBJECTIVES
After completing this course, the participant will be able to:
• Sign up for the WAVE™ PTX trial and upgrade to a paid subscription.
• Navigate the new WAVE™ PTX PTT application’s interface.
• Make calls, share location, and send secure multimedia messages.
• Create Quick Groups from the map view, add Geofences, and use Supervisory Override.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None
SOFTWARE & APPLICATIONS
For information on prerequisites and to register for courses visit the LXP at:
LEARNING.MOTOROLASOLUTIONS.COM
For general information contact the Latin America Education Services Help Desk at:
training.lacr@motorolasolutions.com

COURSE OVERVIEW
This course provides instruction on how to operate the WAVE™ PTX Dispatch web-based application. Split into short clips, this in-depth course covers the basics, from installation and high-level overview, through making, receiving and recording calls, sending and receiving secured messages, using the map and monitoring TalkGroups, and then moves on to more advanced features, such as geofencing and location history.

TARGET AUDIENCE
This training is intended for WAVE™ PTX users who want to get familiar with the features and operation principles of WAVE™ PTX Dispatch application in order to coordinate fleets and communicate with them.

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Install and launch WAVE™ PTX Dispatch application.
• Navigate the application’s interface.
• Use the map.
• Make and receive calls.
• Send and receive secure messages.
• Perform advanced operations.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

WAVE™ PTX DISPATCH
OVERVIEW
PSA0017L
1 HR

COURSE OVERVIEW
This course covers the most essential operations available for WAVE™ PTX Two-Way Radio, such as adding and activating radios through WAVE™ PTX Portal, turning the device on and making talkgroup and private calls. It also touches upon battery and status indicators and basic troubleshooting procedures.

TARGET AUDIENCE
This training is intended for WAVE™ PTX users who want to learn how to add and activate a TLK 100 through WAVE™ PTX Portal and how to operate the device.

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Add, activate, and edit a TLK 100 through WAVE™ PTX Portal.
• Make and receive talkgroup and private calls.
• Perform basic troubleshooting procedures.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

WAVE™ PTX TWO-WAY
RADIO OVERVIEW
PSA0018L
0.5 HRS

COURSE OVERVIEW
This course provides instructions on how to integrate the WAVE™ PTX application with MOTOTRBO™ Systems. It includes software simulations showing how to add radio systems and gateways. It also provides guidance on how to associate Gateways with Radio Systems, edit Radio Systems, add Subscribers and TalkGroups.

TARGET AUDIENCE
This training is intended for WAVE™ PTX users who want to get familiar with the process of WAVE™ PTX integration with MOTOTRBO™ Systems, including operations on Radio Systems, Gateways, Subscribers and TalkGroups.

COURSE OBJECTIVES
After completing this course, the participant will be able to:
• Add Radio Systems in WAVE™ PTX (Capacity Plus Single Site, Capacity Plus Multi-Site, and Capacity Max).
• Add Gateways in WAVE™ PTX and associate them with Radio Systems.
• Edit Radio Systems, add Subscribers and TalkGroups.

REQUISITE KNOWLEDGE
Completion of the following course or equivalent experience:
• PSA2001L WAVE™ PTX Administrator

PREREQUISITES
None
SOFTWARE & APPLICATIONS

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For general information contact the Latin America Education Services Help Desk at: training.lacr@motorolasolutions.com

SOFTWARE & APPLICATIONS

COURSE OVERVIEW
This course provides an overview of the WAVE™ PTX application, its key features, integration possibilities, and roles within the application. It includes clickable software simulations showing basic operations, operations on Customers, and operations on Partner Employees within the Administrator role.

TARGET AUDIENCE
This training is intended for WAVE™ PTX users who want to get familiar with Administrator features and functionalities of the application.

COURSE OBJECTIVES
By the end of the course, you should be able to:
• Describe the WAVE™ PTX application, its key features, integration possibilities, and roles within the system.
• Perform basic operations.
• Perform operations on Customers: adding, editing Customers, Employees, Users, and TalkGroups.
• Perform operations on Partner Employees: adding and editing Partner Employees.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

WAVE™ PTX ADMINISTRATOR
PSA2001L
0.5 HRS

COURSE OVERVIEW
This course provides a high level overview of how information flows through the PremierOne Suite and the integration between each product.

TARGET AUDIENCE
This training is intended for anyone who wants an understanding of PremierOne CAD features, basic dispatching functions, and call taking functions.

COURSE OBJECTIVES
By the end of the course, you will be able to:
• Participate the Pre-Provision Training
• Recognize the interaction between PremierOne CAD, Mobile, Handheld and Records products

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

PREMIERONE APPLICATION INTEGRATION FOR FIELD RESPONDERS OVERVIEW
AST0015
1 HR

COURSE OVERVIEW
This course is a high-level overview of what PremierOne suite is. It explains basic concepts and functionalities of PremierOne applications that are part of the suite and shows how these integrate into a customers’ organization.

TARGET AUDIENCE
This training is intended for anyone who wants an understanding of PremierOne CAD features, basic dispatching functions, and call taking functions.

COURSE OBJECTIVES
At the completion of the course the students will be able to:
• Identify all the applications of the PremierOne Suite
• Describe how the applications integrate into a customers’ work place

REQUISITE KNOWLEDGE
None

PREREQUISITES
None

PREMIERONE SUITE HIGH LEVEL OVERVIEW
AST1015
1 HR
SOFTWARE & APPLICATIONS

For general information contact the Latin America Education Services Help Desk at:
training.lacr@motorolasolutions.com

For information on prerequisites and to register for courses visit the LXP at:
LEARNING.MOTOROLASOLUTIONS.COM

COURSE OVERVIEW
This course will show how PremierOne CAD is used in a customer environment. The full suite of applications will be seen or referenced however, not all of them may be installed at any one customer site.

TARGET AUDIENCE
This training is intended for anyone who wants an understanding of PremierOne CAD features and how to perform basic dispatching and call taking functions.

COURSE OBJECTIVES
By the end of the course, you should be able to:
• Recognize PremierOne CAD from the CAD dispatchers point of view
• Identify information the dispatcher receives from the public
• Identify information the dispatcher sends to the officer (mobile)
• Identify information the dispatcher receives back from the officer

REQUISITE KNOWLEDGE
Completion of the following course or equivalent experience:
• AST1015 PremierOne Suite High Level Overview

PREREQUISITES
None

PREMIERONE CAD USER OVERVIEW
1 HR
AST1022

PREMIERONE MOBILE USER OVERVIEW
1.5 HRS
AST1023

PREMIERONE RECORDS USER OVERVIEW
1 HR
AST1024

COURSE OVERVIEW
This course allows the attendees to view a demonstration of the case reports flow and other day-to-day operations within PremierOne Records.

TARGET AUDIENCE
This training is intended for anyone who wants an understanding of PremierOne CAD features, basic dispatching functions, and call taking functions.

COURSE OBJECTIVES
At the completion of the course the students will be able to:
• Describe the use of PremierOne Records from various user role perspectives
• Recognize how the product works at a functional level

REQUISITE KNOWLEDGE
Completion of the following course or equivalent experience:
• AST1015 PremierOne Suite High Level Overview

PREREQUISITES
None
COURSE OVERVIEW
This course provides a walkthrough of offender management processes within PremierOne Jail from Arrest to Release.

TARGET AUDIENCE
This training is intended for anyone who wants an understanding of PremierOne Jail features and how to perform basic tasks, such as inmate booking, assessments, sentencing, and more.

COURSE OBJECTIVES
By the end of the course, you should be able to:
- Describe the offender management workflow used within PremierOne Jail
- Recognize how the product works at a functional level

REQUISITE KNOWLEDGE
Completion of the following course or equivalent experience:
- AST1015 PremierOne Suite High Level Overview

PREREQUISITES
None

COURSE OVERVIEW
The purpose of this course is to provide the steps to operate and maintain a customer’s IMW system within their Motorola system (ASTRO®, DIMETRA, LTE).

TARGET AUDIENCE
Professionals responsible for the operation and maintenance of a customer’s IMW system within their Motorola systems (ASTRO®, DIMETRA, LTE).

COURSE OBJECTIVES
By the end of the course, you will be able to:
- Describe IMW features.
- Configure an IMW system.
- Identify the IMW tools to administer the system.
- Perform routine administration.
- Perform troubleshooting.
- Understand system-specific considerations.

REQUISITE KNOWLEDGE
None

PREREQUISITES
None
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